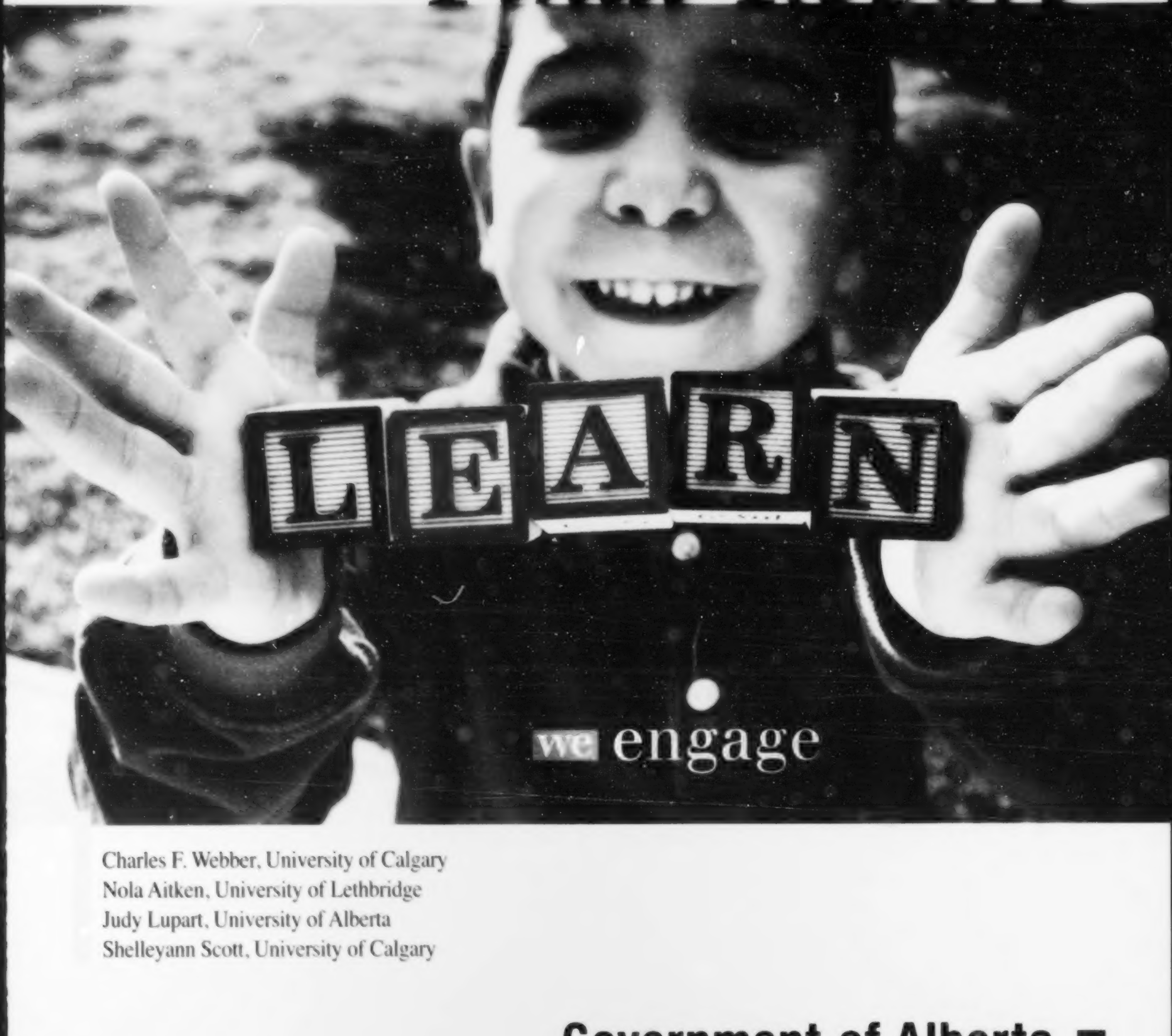
The Alberta Student Assessment Study

Final Report



Charles F. Webber, University of Calgary
Nola Aitken, University of Lethbridge
Judy Lupart, University of Alberta
Shelleyann Scott, University of Calgary

Government of Alberta
Education

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Charles F. Webber, University of Calgary
Nola Aitken, University of Lethbridge
Judy Lupart, University of Alberta
Shelleyann Scott, University of Calgary

June 2009

ALBERTA EDUCATION CATALOGUING IN PUBLICATION DATA

The Alberta student assessment study : final report / Charles F. Webber … [et al.].

ISBN 978–0–7785–8171–0

1. Educational tests and measurements – Research – Alberta.
2. Students – Rating of – Alberta. 3. Achievement tests – Alberta.
I. Webber, Charles F.

LB3058.C2 A333 2009 370.7

For further information, contact:

Alberta Education
Learner Assessment
Building Classroom Assessment Initiative
44 Capital Boulevard
10044 – 108 Street
Edmonton, Alberta
Telephone: 780–422–3535 in Edmonton or
toll-free in Alberta by dialling 310–0000
Fax: 780–422–4200

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TABLE OF CONTENTS

Acknowledgements iii

Introduction 1

Context 1

Definitions 3

Literature Summary 5
  Classroom Assessment 6
  External Assessment 8
  Assessment and At-risk Students 9
  Summary 10

Methodology 10
  Overview 10
  Validity and Reliability 11
  Study Participants 12
  Procedure 12
    Stage One 14
    Stage Two 14
    Stage Three 18
  Data Analyses 30
    Quantitative Data Analyses 30
    Qualitative Data Analysis 30
  Role of the Researchers 32
  Ethical Considerations 32

Study Findings 33
  Initial Focus Group and Interview Findings 33
    Politics of Assessment 35
    Teacher Learning 36
    Decision Making 37
    Communication and Relationships 38
    Instructional Leadership 39
    Fairness and Equity 40
  Stage Three Qualitative and Quantitative Findings 41
    Priorities for Assessment 42
    Teacher and Classroom-based Assessment 47
    Provincial Assessment 59
    Grade Level of Achievement 81
    Decision Making 86
    Leadership 87
    Professional Development and Teacher Knowledge 95
    Preservice Education 107
    Communication and Relationships 112

Fairness and Equity 121
Politics of Assessment 131

The Alberta Student Assessment Study Implications and Recommendations 134
Curricular Learning Outcomes: Optimal Theory and Practice 134
Classroom-based Assessment: Principles 134
Classroom-based Assessment: Practices 135
Provincial Assessment: Principles 136
Provincial Assessment: Practices 136
Performance Standards: Optimal Theory and Practice 137
Performance Standards: Principles 137
Performance Standards: Practices 138
Grade Level of Achievement Reporting: Optimal Theory and Practice 138
Grade Level of Achievement Reporting: Principles 138
Grade Level of Achievement Reporting: Practices 138
Using External Tests and Classroom-based Assessment for Decision Making 139
External Testing 139
Classroom-based Assessment 140
Facilitating Effective Classroom Assessment 141
Facilitating Accurate and Meaningful Reporting of Assessment Information 141
Facilitating Accurate and Meaningful Reporting of Grade Level of Achievement 142
Professional Development that Promotes Effective Classroom Assessment 142
Principles for Professional Development 142
Preservice Teacher Learning Guidelines 143
Early-Mid-Late Career Learning Guidelines 144
Where Do We Go From Here? 145
Recommendations for Developing a Holistic Framework for Classroom Assessment 145
Additional Recommendations 146

References 148

ACKNOWLEDGEMENTS

The Alberta Student Assessment Study research team extends its sincere gratitude to the many hundreds, indeed thousands, of individuals who accepted our invitation to participate in this study of student assessment in Alberta schools. Participants included representatives of all of the groups often involved in studies like this one—teachers, principals, superintendents, school board members, ministry personnel, parents, school council members—and also to the elementary and secondary students in public, Catholic, charter, alternative, Hutterite, and home school settings in urban, suburban, and rural communities throughout Alberta. The honesty, integrity, and courage with which these individuals presented their views speak to the ongoing success of the Alberta education system as a major contributor to the civil society that we enjoy in this province and this country.

We acknowledge, also with gratitude, the funding for this study that was provided by Alberta Education. Further, it is important to note the academic freedom granted to the research team by Alberta Education and the Faculties of Education at the University of Calgary, University of Lethbridge, and the University of Alberta. The academic freedom to report research findings, without risk, when and how researchers believe appropriate is the cornerstone of scholarly research and central to the credibility of research findings.

INTRODUCTION

This is the final report for a multi-stage study of student assessment in Alberta undertaken by a research team representing the University of Calgary, the University of Alberta, and the University of Lethbridge. The researchers will report on (a) optimal assessment theory, policies, and practice that will inform educational decision-making in Alberta; (b) educational leadership practices that support effective student assessment and reporting; and (c) professional development frameworks that enhance the capacity of Alberta educators in classroom assessment.

The study emerged from an initial request from Alberta Education personnel to the Deans of Education at the Universities of Calgary, Alberta, and Lethbridge. Alberta Education identified the study objectives, listed above, and offered to fund the cost of the research. Then, the Deans and Alberta Education agreed that the Deans would appoint research team members with the necessary expertise, and that the researchers would have academic freedom to design and conduct the study and to report freely the study findings. Subsequent to the appointment of the research team members, all educational stakeholders, including Alberta Education, were invited to participate in the study. The members of the research team undertook the research as part of their assigned university duties and received no personal payments.

This report consists of the following components. First, the context of the study is described. Then, a summary of selected literature is provided, followed by an explanation of the study methodology. Subsequently, study Stages One through Four will be described. The report concludes with a set of recommendations for each of the study foci.

CONTEXT

Student assessment in many nations is an educational area replete with widely varying perspectives, and educational stakeholders in Alberta hold a full range of views about assessment policies and practices. The vast majority of student assessment is designed and conducted by classroom teachers. Therefore, the importance of the teacher's role in assessment is critical in student learning and achievement. Indeed, most decision making about students' educational programming is premised upon the information garnered by classroom teachers.

In addition to teacher-conducted student assessment, students in Alberta write standardized tests that are part of the provincial standardized testing program. That is, students in grades 3, 6, and 9 write Provincial Achievement Tests (PATs), designed to provide a general overview of how students are learning, to report on the degree to which students have achieved provincial standards, and to assist educational stakeholders "in monitoring and improving student learning" (Alberta Education, 2008a, p. 1). In addition, students in Grade 12 write Diploma Examinations in selected courses (Alberta Education, 2008b). Provincial achievement tests and diploma examinations are intended to support classroom teachers with information about programs and student strengths and weaknesses at the provincial level (Alberta Education, 2007a). Also, Alberta Education (2008c) states that its policy of Grade Level of Achievement Reporting—which requires teachers to describe the achievement in students from grades one through nine as "at," "above," or "below" grade level—will promote a clear understanding of the Alberta curriculum, recognize normal variations in student achievement, promote the use of a range of assessment techniques, be useful for decision-making purposes, and promote clear communication among students, parents, and teachers.

At least some of the Alberta Education student assessment policies and practices are supported by the Alberta School Boards Association (ASBA) (2008), according to its governance handbook that states that it supports testing of all students for the purpose of monitoring overall student achievement in the province. The ASBA, Alberta Education, and the Alberta Teachers' Association (ATA) also note that the use of test data to rank teachers, schools, or school districts is not appropriate and recognize that provincial standardized achievement testing can assess only some learner outcomes (Alberta Education, 2009b); ASBA, 2008; Alberta Teachers' Association, 2008). The ATA (2006, 2007) agrees that assessment should be in support of student learning but cautions against overemphasizing assessment of lower level knowledge at the expense of higher level knowledge. The ATA notes that students with special needs have modified programs, which means that, although they may be allowed special provisions for taking examinations, they may not have been taught some of the material covered in provincial standardized testing programs. In addition, the ATA discourages teachers from using provincial standardized tests in their evaluation activities and, moreover, is opposed to using provincial achievement test data as a measure of school accountability. Indeed, the ATA believes it has been marginalized in student assessment policy discussions. Further, Alberta Education's Grade Level of Achievement Reporting initiative is not supported by the ATA, which believes there will be little benefit from it for students and parents (ATA, 2005/2006; ATA, 2007; Couture, 2007, 2009).

The College of Alberta School Superintendents (CASS) (2007) has taken a position in support of provincial standardized testing in Alberta but also supports reviewing some aspects of the existing testing program. As well, CASS notes that student assessment should be both "for" and "of" learning.

These are only some of the position statements made by educational organizations in Alberta. Although research indicates that professionals are divided into camps for and against testing, the public is quite firm in its belief about the usefulness of testing. Further, according to a survey of 785 Canadian adults (conducted by Compas Inc. for the National Post/CanWest) 35% of survey respondents believed in province-wide testing for every grade, 44% believed in testing for a few grades, and only 20% did not believe in testing at all (Burger & Krueger, 2003). Clearly, current student assessment policies and practices are contested and controversial.

DEFINITIONS

Alberta Initiative for School Improvement (AISI) has the goal of improving "student learning and performance by supporting initiatives that address unique needs and circumstances within school authorities." This support includes "encouraging teachers, parents, and the community to work collaboratively to introduce innovative and creative initiatives based upon local needs and circumstances." AISI includes the provision of "an AISI Clearinghouse of projects and promising practices, supporting documents for planning and implementation AISI projects, literature synopses, research reports, provincial reports, newsletters, and other publications related to school improvement, and workshop and conference information" (Alberta Education, 2009a).

As learning is the active involvement of students in assessing evidence of their learning to assist them in understanding what they need to know and improve upon to successfully meet their goals and learning outcomes.

Assessment is the ongoing process of gathering a variety of student assessment evidence to make decisions for improvement of student learning.

Authentic assessment is a process that consists of "Engaging and worthy problems or questions of importance, in which students must use knowledge to fashion performances effectively and creatively. The tasks are either replicas of or analogous to the kinds of problems faced by adult citizens and consumers or professionals in the field" (Wiggins, 1993, p. 229).

Criterion-referenced tests are those in which questions are written according to specific predetermined criteria. A student knows what the standards are for passing and only competes against him or herself while completing the test.

Diploma Examinations are those that are based on "selected Grade 12 courses: English Language Arts 30–1, English Language Arts 30–2, Français 30, French Language Arts 30–1, Social Studies 30, Social Studies 33, Pure Mathematics 30, Applied Mathematics 30, Biology 30, Chemistry 30, Physics 30, and Science 30." The Diploma Examination contributes 50 percent of a student's final mark in each of these courses with the school-awarded mark contributing to the remaining 50 percent of each final course mark. The school-awarded mark provides for performance-based assessments, such as oral reports, class projects, and so on. When the external Diploma Examinations mark and the school marks are combined and weighted equally, the final mark is awarded for the Alberta High School Diploma (Alberta Education, 2008b)

For learning is a formative assessment, diagnostic in nature, done systematically throughout the year. Its main purpose is to monitor students' daily progress to provide meaningful conversation and feedback about ways for students to hit the clearly defined targets that the teacher has set with the students, and ways for the teacher to adjust teaching to meet the students' needs based on the evidence of students' progress.

High-stakes test is "a test that results in some kind of consequence for those who score low, some kind of reward for those who score high, or both. For example, students who pass a high school exit exam typically receive a diploma, while students who fail do not" (West Regional Equity Network).

Norm-referenced tests are those in which educators interpret a student's performance in relation to the norm group and placing the student's score on a normal distribution curve or "bell curve." Students compete against each other on this type of assessment.

Of learning is a summative assessment to make judgments about student learning. Summative assessment is planned for predetermined events that occur at the end of a unit, activity, course, term, or program, and used for grading and reporting purposes to share with those outside the classroom.

Provincial Achievement Tests are standardized criterion-based tests that "are administered annually in English and Français/French language arts and mathematics in Grade 3, and in English and Français/French language arts, mathematics, science, and social studies in grades 6 and 9." In Grade 9 as well, there are "achievement tests based on the Knowledge and Employability programs of study in English language arts, mathematics, and science .... French translations of all mathematics, science, and social studies achievement tests, except Knowledge and Employability social studies, are available for students in Francophone and French immersion programs" (Alberta Education, 2008a).

Stakeholders are those people who have a direct or indirect stake in education, such as educators, students, parents, school trustees, teacher professional organizations, and government personnel.

Standardized tests can be norm-referenced or criterion-referenced; they have a standard format, and the same instructions, test questions, and allotted time for all students.

Statistical literacy means understanding descriptive statistics and interpreting student achievement results accurately. For example, it means being knowledgeable about stanines, grade-level equivalence, criterion and norm-referenced tests, and the normal curve.

Testing is assessing students formatively or summatively through written tools such as an essay or multiple-choice test, or a performance tool such as an oral examination.

Vice principal and *assistant principal* designations are used interchangeably depending on school district preference. The assistant or vice principal assists principals in carrying out duties as assigned by the principal in accordance with school board policy.

LITERATURE SUMMARY

The following is a brief literature review that addresses some of the issues that emerged in discussions of student assessment. It does not attempt to cover all of the information provided by the organizations cited above; those documents generally do a thorough job of explaining the perspectives of educational organizations in Alberta and of identifying possible uses and abuses of student assessment data. Indeed, the cited documents typically portray levels of sophistication and understanding of student assessment that counter much of what is reported below. Nonetheless, it was important to undertake this study with a clear understanding of what is expressed in contemporary theory and research about student assessment policies and practices.

It is important to note that the literature presented here is necessarily brief. Much more detailed reviews guided The Alberta Student Assessment Study and they are summarized in forthcoming edited collections, e.g., Webber and Lupart (in press); Scott, Webber, Aitken, and Lupart (in preparation); and Aitken, Webber, Lupart, and Scott (in preparation). These forthcoming publications collectively provide comprehensive Canadian and international perspectives on student assessment.

For the purpose of this abbreviated review, at least three main issues relevant to the Alberta education system have been identified as barriers to student assessment being perceived as a positive educational endeavor. The first issue identified by researchers is teachers' weak understanding of fair assessment practices, the second is teachers' perceptions of external accountability initiatives, and the third is the impact of inappropriate assessment of at-risk students. All three of these issues may contribute to prevailing negative perceptions of student assessment. This notion further contributes to teacher reluctance to fully engage in carrying out assessment that is integral to teaching and meaningful learning. Consequently, external assessment such as provincial standardized achievement tests may exacerbate the view that assessment is one of the most disliked and resisted components of teaching (Black, Harrison, Lee, Marshall, & Wiliam, 2003; Burger & Krueger, 2003; Earl, 2003; Guskey, 2004; Stiggins, 2001).

Classroom Assessment

Much research suggests that teachers in general are not proficient in student assessment practices in Alberta and the Western world (Aitken, 1994; Black & Wiliam, 1998; Black et al., 2003; Burke, 2005; Earl, 2003; Guskey, 2004; Perkins, 1992; Popham, 2004; Smith, 1986; Stiggins, 2002; Stiggins, Arter, Chappuis, & Chappuis, 2004). Indeed, the need for professional development in student assessment is evidenced by the fact that 40% of Cycle 3 Alberta Initiative for School Improvement (AISI) projects from public school authorities have identified assessment as a project theme (Alberta Education, 2007b). Further, principals are not strong in leading assessment (Scott & Webber, 2008), and assessment historically has been missing from principal preparation programs (Popham, 2002; Stiggins, 1993; Stiggins & Duke, 2008). Although teachers have at their disposal a range of resources and professional development opportunities, often teachers' poor assessment practice prevails. For example, some teachers carry out unfocussed curriculum and assessment planning, and consequently view assessment as an activity tacked on the end of a unit for grading purposes. They do not implement planning and assessment practices that begin with curriculum outcomes that focus on important concepts. Further, the important concepts are not guided by essential questions and purposeful evaluation strategies to provide learning foci for teachers and students. Instead, planning is governed by the use of tried and true, but perhaps inconsequential, activities that are not directly linked to the curriculum or subsequently, assessed via hastily prepared or unrelated tests. When this is the case, the assessments do not provide valid inferences of student achievement or guidance for improved teaching and learning (Earl, 2003; Wiggins & McTighe 1998, 2005). English as a Second Language (ESL) students and students with special needs are a further enigma for teachers because these students are frequently assessed inappropriately, and their special needs not taken into consideration (O'Connor, 2002; Tomlinson & McTighe, 2006; Wormeli, 2006).

Too often teachers are not aware of the variety of assessment tools available and how to use them appropriately or effectively, so they defer to commercially prepared tests that are not fully aligned to the program and instruction (Popham, 2002, 2004). Hence, these tests yield invalid inferences about student achievement in relation to the mandated curriculum and, therefore, are not helpful in improving programs or instruction.

The dearth of assessment tools that teachers have as their knowledge base results in teachers using few and single-purpose assessment strategies instead of the multiple and varied approaches recommended for effective evaluation (Alberta Assessment Consortium, 2007; Alberta Education, 2006b; Black et al., 2003; Davies, 2000; Johnson & Johnson, 2002; Stiggins, 2007; Stiggins et al., 2004; Wiggins, 1993). Teachers frequently resort to using what is available and what they feel confident in using or are accustomed to using, whereas choosing assessment tools should depend on the purpose of the assessment. It is not helpful to limit testing tools to multiple-choice tests if the purpose is to assess students' proficiency in story writing; conversely, giving students an essay test to assess basic facts is equally flawed (Centre for Research in Applied Measurement and Evaluation, 1993).

Research suggests that some teachers tend to ask low-level cognitive test questions and students consequently learn that they do not have to have deep understandings to pass a classroom test (Aitken, 1994; Black & Wiliam, 1998; Black et al., 2003; Stiggins, 2002; Wiggins, 1993;

Wiggins & McTighe, 1998). Consequently, teachers too often omit important curricular outcomes and, in their place, test trivia instead of using items that reveal depth of understanding (Perkins, 1992; Popham, 2002). Finally, when teachers do not have time or effective assessment strategies, they generally resort to testing the way they themselves were assessed, too often ineffectively (Guskey, 2004; Stiggins, 1993).

On occasion, teachers unintentionally engage in unfair assessment practice. For example, when teachers award a student a zero for work not handed in on time, they fail to acknowledge that, first, the zero is not an accurate description of achievement or of students' understanding of content material, but instead behavior, and second, one zero averaged with other grades has a devastating effect on a student's overall grade, particularly if the work that was assigned a zero has been heavily weighted (Guskey, 2004; O'Connor, 2002; Reeves, 2004).

Some teachers also have misconceptions about weighting and the role of descriptive statistics in evaluation. The problem of weighting usually occurs when teachers have not considered it during the initial planning stage. Faced with a baffling array of marks, teachers make errors such as weighting less important components on an equal basis with important components. This is a common error and again misleads the student, parent, and receiving teacher about the student's actual achievement. A poor speller can very well be a solid and creative writer but, similar to aggregating achievement and effort, weighting spelling with writing equally can skew the final result inappropriately. Further problems have arisen with inappropriate use of the bell curve, which does not indicate students' depth of knowledge and understanding; it only provides information on the relative standing of students within a group (Guskey, 1996; Marzano, 2000, 2006; O'Connor, 2002; Reeves, 2002; Stiggins et al., 2004; Wiggins, 1993).

There is widespread agreement among teachers that grading and communicating results clearly, consistently, and sensitively are among the most difficult and uncomfortable parts of evaluation. This may be due to a lack of understanding about how to carry out assessment and lack of information about competing purposes of assessment (Earl, 2003; Earl & Katz, 2006; Elmore, 2005; Guskey, 2004; Hargreaves, Earl, Moor, & Manning, 2001; Marzano, 2000, 2006; O'Connor, 2002; Stiggins, 2001). Taking all of these issues into consideration, students' results may not be reliably interpreted or reported (Cohen & Hill, 2001; Marzano, 2000, 2006; Popham, 2002; Stiggins, 2001; Wright, 2000).

External Assessment

Beyond the classroom assessment challenges that teachers face, there are external accountability measures such as government standardized achievement tests that may add to a negative perception of assessment. The purpose of the provincial standardized achievement tests is to monitor programs and to provide additional information for schools about student achievement to support learning. Unfortunately, these measures also are used by some organizations as "league tables" for inappropriate comparison of schools and school districts, consequently leading to controversy.

Teachers' lack of understanding of external or perceived "high-stakes testing" purposes has a direct negative impact on their teaching practices and attitudes toward assessment (Aiken, 1991; Aitken, 1994; Bracey, 2005; Burger & Krueger, 2003; Cannell, 1987; Earl, 2003; Fairhurst, 1993; Lewis, 2007; Smith, 1991). Teachers often limit important curricular outcomes rather than address *all* curriculum outcomes. For example, some teachers favor rote memorization techniques instead of deep learning and student engagement in real-world math problems, in their mistaken belief that this will improve test scores. A cogent example of this practice being used at the expense of more meaningful teaching is the drill and practice exercises such as those evidenced in timed math worksheets (Brandt, 1995; Earl, 2003; Earl & Katz, 2006; Kohn, 2000; Wiggins & McTighe, 2005).

Although substantial evidence has been reported to confirm a strong link between socio-economic status (SES) and achievement, this is not necessarily true in all cases (Burger & Krueger, 2003). Educators should be encouraged to address student needs on an individual basis (Elmore, 2005; Haberman, 1995, Wenglinsky, 2002; Wormeli, 2006).

More recently, there has been a misguided understanding about assessment *for* learning and assessment *of* learning, as educators often cite the recent work of Black et al. (2003). Assessment *for* learning has been privileged in education circles over assessment *of* learning. This was not the original intention of Black et al. who were clear that summative tests should be viewed as a positive component of the learning process. The perception that assessment *of* learning is a less valued or unacceptable practice has been used to marginalize external testing programs. Stiggins (2002) warns that teachers should not fall prey to pitting one kind of assessment against the other. Both formative and summative assessments are important and should be used.

Lissitz and Schafer (2002) affirm that external accountability assessments do provide verification that the curriculum has been addressed effectively. Other researchers in Canada and elsewhere, such as Elmore (2005), Reeves (2002), Rogers (1991), and Zachariah and O'Neill (1986) also assert that external testing is necessary for monitoring quality instruction.

Thus far, what the literature review has shown is that there is a need to support teachers in improving assessment practices and that both classroom assessment and external assessment are important in making decisions about student learning and program planning. Pellegrino (2006) provides compelling arguments to make radical changes to the way we think about, design, and administer assessment because of what we now know about the way students learn. Students need to know facts from which to build their thinking structures. They need to have the deep understanding required to fit these facts into a conceptual framework or "big picture" to make further connections and associations for logical applications into new disciplines. The Joint Committee on Standards for Education Evaluation (2003) states this critical importance: "Evaluation of students is central to student learning in every school and classroom. Without evaluation, we do not know if learning has taken place, nor can we plan for future learning opportunities" (p. 1). Although some teachers use fair assessment practice as identified by the Centre for Research in Applied Measurement and Evaluation (CRAME) (1993), many are not, likely due to lack of confidence and relevant skills.

Even though much of the focus of school improvement via the AISI projects is centered on classroom assessment practice, and although teachers' professional development and staff development projects are supported by the work of the Alberta Assessment Consortium, there is still much work to be done. The Alberta Commission on Learning report (Alberta Education, 2003) left no doubt that effective assessment and evaluation practices are integral to the welfare of Alberta students. It is essential that stakeholders work collaboratively to continue to improve student achievement, teaching, learning, and assessment practice, and embrace assessment and accountability as significant processes for student success in the 21st century.

Assessment and At-risk Students

Although students with obvious disabilities were generally excluded from public education for the first half of the twentieth century, all others were expected to meet some sort of "minimal standard." As the public education systems grew and developed over the ensuing decades, it was gradually recognized that standard curriculum, standard achievement, and standard outcomes were not appropriate for a considerable portion of students attending schools (Ball 2004; Philpott, 2008). Thus, the immediate assessment-related agenda for schools is to differentiate teaching and assessment.

Expertise in assessment and instructional programming for students with challenging learning needs has developed over the past 30 years. Advocates for inclusion now put the onus on schools to ensure the successful learning of diverse students (Ball, 2004; Edgmon, Jablonski, & Lloyd, 2006; Hahn, 1989; Luykx, Lee, Mahotiere, Lester, Hart, & Deaktor, 2007; Neufeld, & Stevens, 1992; Philpott, 2008; Skrtic, 1996).

Regular classroom teachers are the front-line professionals who have the major responsibility for making inclusive teaching and assessment work (Lupart & Webber, 1996, 2002; Philpott, 2008; Standing Senate Committee on Human Rights, 2007). Therefore, a coordinated, province-wide use of available research will facilitate best student assessment policies and practices. As well, critical gaps in our assessment knowledge base need to be identified and appropriate research conducted. Finally, government, university, school district, school, and community organizations need to align efforts and resources to achieve the learning success of the full continuum of student diversity in Canadian schools.

Summary

Members of the Alberta educational community collectively possess much of the knowledge and skills necessary to contribute to the ongoing improvement and balancing of student assessment practices. However, the knowledge and skills need to be shared and expanded. A balanced approach to assessment must give appropriate play to the multiple functions of classroom assessment along with other forms of testing, such as summative, norm-referenced testing, to complete the picture of student achievement and provide appropriate feedback to students, parents, and policy-makers (Burger & Krueger, 2003). Provincial organizations, such as Alberta Education, CASS, the ATA, and the ASBA, hold strongly expressed views about student assessment and know its strengths and limitations. We obviously want to move beyond what we knew and did in the past (Webber, 1986) and construct a common vision for student assessment in Alberta.

METHODOLOGY

This research was a coalescence of the positivist and interpretive paradigms (Cohen, Manion, & Morrison, 2000). This was demonstrated by the researchers seeking to incorporate increased objectivity and a uniformity of approach characteristic of the positive epistemology, along with more interpretive approaches, such as focus groups and interviews, with the view to obtaining rich insights from the stakeholders. This coalescent approach was undertaken purposefully to obtain a measure of generalizability of results and also to capture the intent of the stakeholders' perspectives so that greater meaning could be made and more relevant recommendations would result (Gay, Mills, & Airasian, 2006).

Overview

This research was a multi-stage study whereby stakeholders at different levels of the organization and with different perspectives would be involved (Onwuegbuzie & Teddlie, 2003; Tashakkori & Teddlie, 1998). It was a sequential explanatory mixed-methods strategy which allowed data collected in the initial stages to inform subsequent stages and instrument development through an iterative analytical approach (Gay et al., 2006). This meant that data collected in the initial stages enabled more informed development of the questionnaires and interview questions. However, data analyses also continued in an iterative manner during the interview stage. As Patton (2002) stated "[t]oday's evaluator must be sophisticated about matching research methods to the nuances of particular evaluation questions and the idiosyncrasies of specific stakeholder needs" (p. 68).

Validity and Reliability

The researchers used a mixed-method approach as this was perceived to "contribute to methodological rigor" (Patton, 2002, p. 68). Gay et al. (2006) defined validity as being

> …the degree to which a test measures what is it is intended to measure; a test is valid for a particular purpose for a particular group. In qualitative research, it is the degree to which qualitative data accurately gauge what the researcher is trying to measure. (p. 603)

Gay et al. (2006) defined reliability as "[t]he degree to which a test (or qualitative research data) consistently measures whatever it measures" (p. 601). Employing a mixed-method design using both qualitative and quantitative methodologies meant that the potential disadvantages inherent in one methodology could be overcome through the advantages of the other, thereby enabling a more complete understanding of the research problem (Cresswell, 2008). Mixed methods enabled a more comprehensive capture of both the breadth and depth implied by the broad nature of the research team's mandate. Because each method revealed different aspects of empirical reality, multiple methods of observations were used to strive to capture the complete phenomenon. For example, focus groups, interviews and other qualitative methodologies were particularly useful in identifying issues and included the participants' perspectives on these issues in some depth, but could not address the prevalence of the issues beyond the initial sample. Questionnaires, on the other hand, were excellent for establishing patterns across larger populations, but less suited to examining these issues in depth or to fully developing the implications for lived experience (Cohen, Minion, & Morrison, 2000). Both quantitative and qualitative methods were therefore necessary to fulfill the study mandate.

A mixed-methods approach was more likely to provide accurate, evidence-based conclusions and recommendations. The use of multiple methods to provide theoretical and methodological checks and balances is referred to as triangulation. Denzin and Lincoln (2000) stated "the use of multiple methods, or triangulation reflects an attempt to secure an in-depth understanding of the phenomenon in question … [it] adds rigor, breadth, complexity, richness, and depth to any inquiry (Denzin & Lincoln, p. 5)." The "trustworthiness" of the conclusions established by "triangulation" was superior because they have been verified through "the use of multiple data sources" (Gay, et al., 2008, p. 88). In this study, triangulation was undertaken using early-stage focus group data from stakeholder groups and comparing them with the questionnaire and interview data that were collected from stakeholders in schools. This triangulation provided both reliability or replicability and validity checks by permitting the comparison of themes in the different data groups.

Denzin and Lincoln (2000) suggested that the terms "validity" and "reliability" in qualitative research mean slightly different things and are obtained in different ways… "[v]alidity in qualitative research has to do with description and explanation and whether or not the explanation fits the description. In other words, is the explanation credible?" (p. 393). A process adopted in this study, that directly related to ensuring validity in the qualitative data analysis was the checks that research team members made on each other as they worked through the data analyses. Data processing approaches were devised together so that all members agreed and understood how to undertake it. Additionally, at each stage, interrater reliability checks were also included so that the team could be certain that one person had not deviated from the agreed process or misinterpreted the data. Returning to the raw data frequently also enabled the team to be certain that the context of the statement was not lost or the intent misconstrued. All members of the team worked at the same venue throughout the data processing and analysis stages, which enabled all team members to check with each other on points of confusion or to do crosschecks in interpretation of coding categories.

Denzin and Lincoln (2000) stated that "validity" and "reliability" in qualitative data gathering result when we "cross–check our work through member checks….The researcher needs to find a way to allow for the participants to review the material one way or another" (p. 393). In this study when conducting interviews and focus groups, two of the researchers typed verbatim notes, which were projected onto a wall or screen so that participants could read the notations while the interview, was proceeding. As an immediate validation technique respondents were invited to check the accuracy of the transcription and to make any changes at the time of the interview. This assured the respondent that the researchers were accurately noting their thoughts and opinions. This was not simply a courtesy as some respondents actually clarified the notes and asked for changes or additions to be included which served to make overt the intent of their comments.

A trial of the questionnaire was undertaken to test the validity of the instrument. This process was described in detail in the "Questionnaire Design Stage" section; however, essentially it ensured that the intent of the questions was clear and that respondents understood the questions.

Study Participants

The researchers sought to include as many of the educational stakeholders as were possible and reasonable within the two-year timeframe. The stakeholders in this study were elementary and secondary school students, parents, teachers, principals, assistant/vice principals, and curriculum leaders. Participants were drawn from both urban and rural contexts and represented public, separate, and charter school jurisdictions. Additionally, stakeholders from a range of organizations were included, such as, Alberta Education, the College of Alberta School Superintendents, the Alberta Teachers' Association, the Alberta Assessment Consortium, Alberta School Councils Association, the Alberta School Boards Association, and faculty of education academics from three of the larger universities in Alberta.

Procedure

Figure 1 displays the stages of the study over the two-year study. As previously stated, this was a multi-stage mixed-method design that consisted of four main stages: Stage One – Literature review and lecture series; Stage Two – Focus groups with educational stakeholders, Stage Three – School-based data collection with students, parents, and educators, and Stage Four – Data processing, analyses and reporting.

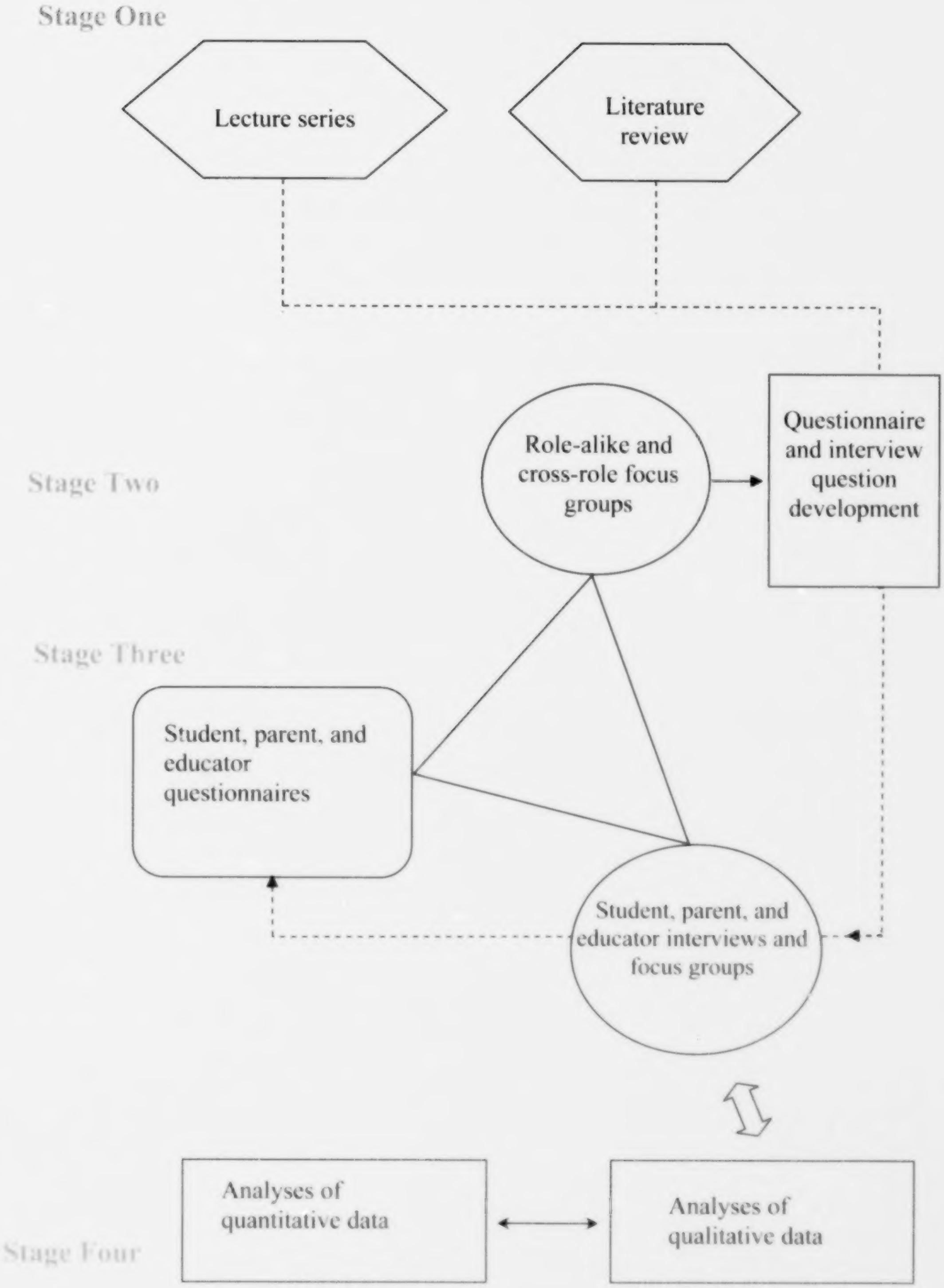
Stage One
Lecture series
Literature review
Stage Two
Role-alike and cross-role focus groups
Questionnaire and interview question development
Stage Three
Student, parent, and educator questionnaires
Student, parent, and educator interviews and focus groups
Analyses of quantitative data
Analyses of qualitative data
Stage Four

Figure 1. Alberta Student Assessment Study Stages.

Stage One

The primary purpose of Stage One was to identify and explore key assessment issues. In Stage One two lecture series were conducted for graduate students across the universities represented by the research team. The two lecture series enabled the exploration of the theories about assessment and the accessing of scholarly expertise from national and international contexts. There were 54 registrants in the two lecture series that featured 24 presenters and co-presenters.

An important element in analysis of current trends within assessment theory and practice was to hear directly from leading scholars in the field. Respected scholars from Canadian and international settings were invited to present, in concurrent face-to-face and videoconference formats to students, and to engage their audiences in discussions related to assessment theories and practices. These lectures were video recorded and made available for professional development purposes to educators in various parts of Alberta. Presenters also were invited to submit manuscripts that focused on their presentation topics and the manuscripts were assembled into a forthcoming edited collection (Webber & Lupart, in press).

Concurrent with the Stage One lecture series was the introduction of an in-depth literature review that continued through all study stages. The ongoing literature review resulted in the research team compiling (underway), of two additional edited collections, both focusing on student assessment in Canada.

Stage Two

Stage Two focused primarily on the commencement of data collection from educational stakeholders in Alberta. This was done through focus group interviews.

Focus groups. Focus group interviews are "essentially a qualitative data gathering technique … that relies upon the systematic questioning of several individuals simultaneously in a formal or informal setting" (Denzin & Lincoln, 2000, p. 650). As a methodology, focus groups are a "collectivistic rather than an individualistic research method that focuses on the multivocality of participants' attitudes, experiences, and beliefs" (Denzin & Lincoln, 2000, p. 836). They are essentially interviews conducted with groups of "individuals … [who] are well informed about the research topic" (Gall, et al., 2007, p. 244). Focus groups result in a collective synergy that helps to explore and clarify participants' perceptions that may not be as readily accessible in a one-on-one interview (Krueger & Casey, 2000, cited in Gall, et al., 2007, p. 244). Focus groups enable interactions among study participants that enhance data quality (Patton, 2002). Focus group discussions are "comfortable and often enjoyable for participants as they share their ideas and perceptions" (Krueger, 1994, p. 6). They reveal "the extent to which there is a relatively consistent, shared view or great diversity of views" (Patton, 2002, p. 386).

Focus groups have the advantage of being relatively inexpensive to conduct and yet "often produce rich data that are cumulative and elaborative; they can be stimulating for respondents, aiding recall; and the format is flexible" (p. 652). Stage Two focus groups (*N* = 78)[1] were largely exploratory in nature, whereby participants were invited to discuss what they knew about assessment in Alberta schools. The exploratory focus groups were organized with representatives of the following organizations:

- Alberta Education (*n* = 28) (personnel at three managerial levels)
- College of Alberta School Superintendents (*n* = 4)
- Alberta Teachers' Association (*n* = 12)
- Alberta School Boards Association (*n* = 2) (elected school board members)
- Alberta School Councils' Association (*n* = 8) (parents)
- Alberta Assessment Consortium (*n* = 12) (representing teachers, principals, school board members, university faculty, and provincial government employees)
- University of Alberta, University of Calgary, and University of Lethbridge (*n* = 12)

Purposeful sampling was used to select participant organizations for the exploratory focus groups. "In purposeful sampling the goal is to select cases that are likely to be 'information-rich' with respect to the purposes of the study" (Gall, et al., 2007, p. 218). In other words the participant organizations were included in the study because they had a particular perspective and certain insights that would inform the research. Once invitations were accepted, individual focus group participants were selected by their organizations rather than by the researchers.

The researchers in this study acknowledged the complexities of participants' views that were frequently influenced by their multiple roles as professionals, parents, and community members. Therefore, the focus groups with these groups were conducted in role-alike and in cross-role focus groups. Role-alike focus groups promoted the exploration of insights particular to each organization.

The focus groups encouraged participants to speak freely and to articulate their perspectives to the researchers and each other, understanding that many within the group would be of the same opinion. Cross-role focus groups facilitated a different dynamic. The disadvantage of these role-alike focus groups is as Denzin and Lincoln (2000) stated "the emerging group culture may interfere with individual expression, and the group may be dominated by one person; and 'groupthink' is a possible outcome" (p. 652). With these potential negative consequence in mind and prepared to facilitate focus group discussion accordingly, the researchers invited each major educational organization in Alberta to send two or three members to attend a larger cross-role focus group. The cross-role focus groups promoted dialogue and sharing of organizational perspectives.

The stakeholder focus groups were conducted face-to-face in stakeholders' facilities or on university campuses to maximize both convenience to the participants and to ensure they felt comfortable in a familiar setting. At least one role-alike focus group was conducted with each stakeholder group. Three cross-role focus groups were conducted with a similar composition of participants attending all three meetings. At least two members of the research team attended each stakeholder focus group. Focus group participant numbers were as low as two and as high as 28.

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[1] Numbers are approximate.

These exploratory interviews were initiated with an explanation of the study, the aims, and the usual university informed ethics statements and consent procedures. The researcher who was guiding the interview commenced the interviews by asking participants what they knew about student assessment in Alberta. This study was informed by Hord, Rutherford, Huling-Austin, and Hall's (1987) Concerns Based Adoption Model (CBAM). This model explores the aspects of a topic most of concern to study participants.

Survey instrument development. As stated in the methodological overview this study was sequential and iterative in that the initial data collected from the focus groups with stakeholders, the literature that was reviewed, and the in-class discussions with teachers and leaders in graduate classes informed the design of the instruments administered in Stage Three. The data from the role-alike and cross-role focus groups were coded into six main themes. These were:

1. The politics of assessment
2. Teacher Learning
3. Decision making
4. Communication and relationships
5. Leadership
6. Fairness and Equity

Questions arising from the six themes served as the basis for the design of the questionnaire and interview questions. That is, based upon the focus group data and a review of instruments used by other researchers, an initial pool of questionnaire items was developed by a doctoral student. The research team members reviewed the databank of potential items and then created what was essentially a set of new items. The research team was careful to avoid asking "leading questions" and to employ internal reliability cross checks (Cresswell, 2008). Mindful of the need to consider the internal reliability and validity of the questionnaires, certain items were repeated in negatively and positively worded forms (Cresswell). These items could then be crosschecked to determine if respondents were consistent in their responses. A mapping process resulted in an even distribution of questions across all six main themes. This was done to avoid disproportionate weighting of questions within a particular theme.

There were four separate questionnaires developed for different participant groups: elementary students, secondary students, parents, and educators (see appendices). This was an example of "cross-sectional design" which "compares two or more educational groups in terms of attitudes, beliefs, opinions, or practices. These group comparisons may compare … students with teachers, students with parents, or they compare other groups within educational and school settings" (Cresswell, 2008, p. 390).

The elementary students' questionnaire contained a significantly reduced number of questions and the wording of the questions was age-appropriate. The secondary student and educator questionnaires were closely aligned. The parent questionnaire contained items parallel to those in the secondary student and educator instruments; however, the section, which explored classroom practices, was omitted in the parent questionnaire. Each survey followed a similar format with demographic sections at the beginning (Section A), followed by rating scale items.

In the educator and secondary student questionnaires, Section B was a set of items which respondents rated using a Likert scale of *Strongly Agree, Agree, Disagree, Strongly Disagree*, and *Don't Know*. In Section C respondents rated the importance of a list of assessment purposes using a Likert-style scale of *Very Important, Important, Of Little Importance, Unimportant,* and *Don't Know.* Section D focused on the frequency of use of a range of assessment practices. These items were rated using a frequency scale of *Always, Often, Sometimes, Rarely, Never*, or *Don't Know*.

The parent questionnaire followed a similar format to that of the educator and secondary student questionnaires; however, their survey did not include the section on frequency of assessment practices. The elementary student questionnaire was simplified with just nine opinion items (Section B) measured on an agree-through-disagree scale; in Sections C and D on the elementary student instrument, 11 and 4 items, respectively, gauged the frequency of use of selected assessment practices. The scales in the elementary questionnaire were included in both written and visual forms with smiley faces and hand signals for students who respond more to visual cues. Additionally, feedback from elementary students when the instrument was piloted indicated that completion of the survey was deemed to be "fun" and more engaging with the visual images.

Each questionnaire type was pilot tested with a small group of individuals who were representative of that stakeholder group. In other words, the elementary survey was pilot tested by a group of elementary students and the parent survey with a group of parents and so on with each version of the instrument. The research team reviewed feedback from the pilot testing and then completed the final versions of the instruments. A draft of the educator questionnaire was provided to participants in the cross-role focus groups and they provided feedback on question intent, clarity of wording, distribution of themes, and physical layout of the questionnaire. This feedback informed the next draft of the instrument. Additional feedback was obtained from small trials with academic colleagues and teachers, with further refinement made as a result. The questionnaires were developed into a scan-readable form with the view to reducing potential errors in data input processes and to increase the efficiency of data entry into SPSS 17 statistical analysis software.

Educator surveys were administered primarily during regular school-based staff meetings where the study goals were explained and voluntary participation invited. In some cases, educator surveys were handed out during staff meetings, completed privately, and subsequently returned to the research team. Student surveys were completed both during school time and at home. Parent surveys were sent home, completed voluntarily, and returned anonymously to the school office for collection by the research team.

Interview question development. Also during Stage Two, a bank of possible interview questions was developed using the six main themes that emerged from the focus groups. (The question bank is included in the appendices to this report.) The question bank facilitated a somewhat uniform, yet still flexible, approach to the interviews. Use of the question bank increased the level of objectivity and structure but was more interpretive than a semi-structured interview schedule. This enabled researchers the freedom to choose questions appropriate to the flow of the interview and individual teachers' conversation, but also helped to ensure comprehensive coverage of the potential range of issues encompassed in the topic of student assessment.

Stage Three

Stage Three included the school-based data collection using individual and small group interviews and, also, the administration of the questionnaires with students, parents, teachers, and principals across Alberta. School trustees were also included in the educator survey and there were 14 trustees who participated.

Face-to-face interviews are "a conversation, the art of asking questions and listening" (Denzin & Lincoln, 2000, p. 633). Further, as Patton (2002, p. 417) noted, face-to-face interviews are:

> …the opportunity for a short period of time to enter another person's world. … This means being interested in what people have to say. You must yourself believe that the thoughts and experiences of the people being interviewed are worth knowing. In short, you must have the utmost respect for these persons who are willing to share with you some of their time to help you understand their world.

Face-to-face interviews. Face-to-face interviews are one of the most expensive data collection processes due to the need to travel to talk to the participant and in finding a shared convenient time to meet. However, it is also one of the most useful and popular methods of exploring an individual's perspectives. Interviews are advantageous for obtaining in-depth insights into individual views and descriptions of practice. Individual interviews enable the participant to express unique or controversial perspectives without fear of censure or, indeed, with complete confidentiality, unlike the focus group interview (Cresswell, 2008). This confidentiality allows the participants complete freedom to describe their world and reality which also provides opportunities to understand their context (Denzin & Lincoln, 2000). As Denzin and Lincoln stated the interview is not "a neutral tool for at least two people create the reality of the interview situation" and yet using a set of pre-designed questions enables the interviewer to remain focused on the research questions and ensures a level of objectivity in the methodological approach (p. 633). In effect, the use of face-to-face interviews provide for a different conversation to that of focus group in providing the richness of individuality and freedom to describe a unique life-view without influence from others and negotiation with a group.

Sampling. In Stage Three, the researchers employed cluster-sampling procedures. Gay, et al. (2006) stated that, using cluster sampling, "intact groups, not individuals, are randomly selected" (p. 106). Gall, et al. (2007) referred to cluster sampling as "selecting naturally occurring groups of individuals." Cluster sampling is used "when it is more feasible to select groups of individuals" (p. 227). In this study it was deemed important to obtain data that were as demographically representative as possible. Therefore, the researchers determined that the clusters needed to represent a range of schooling designations such as public, private, Catholic, Hutterite, alternative, outreach, and charter schools. It also was important to include representation of schools in urban, suburban, and rural situations. The final criterion was to ensure coverage at all levels of the school system, for example, elementary, middle, junior high, and senior high levels. In total, there were 19 schools involved in this study, 20 when the home schooling demographic is included. The following table displays the distribution of school sampling clusters:

Table 1
Distribution of School Sampling Clusters

		School Type					
School Level	**Location**	**Public**	**Magnet**	**Separate**	**Alternative**	**Charter**	**Home**
Elementary	Inner city		1	2			
	Suburban	1			1	1	
	Rural	1					
Middle/ Junior School	Inner city			1			
	Suburban					1	
	Rural	1					
Senior High School	Inner city				1		
	Suburban	1				1	
	Rural	1	1		1		
K–9	Suburban			1			
	Rural K–9	2					
K–12							1

Gaining entrée. To gain entrée to school communities, twelve Alberta school jurisdictions were invited to participate in The Alberta Student Assessment Study and seven agreed to participate. The initial invitation to participate was made through email and telephone contact with superintendents. Considering the demands on school superintendents and districts, the amount of research being conducted in schools, and the extent of the individual ethics documentation required by each board, it was understandable that gaining access was slow. Approval to conduct the research and to organize school visits took approximately eight weeks. The process involved obtaining endorsement from school superintendents who then invited the participation of their schools. Only voluntary participants were included in the study. Once permission to contact schools was received, a combination of email, telephone, and personal visits were made to provide information about the study and the data collection processes, and to organize school participation in the surveys, interviews, and focus groups. Participating schools were most welcoming to the research team, and school and district administrators expended considerable time disseminating information about the study and arranging for the research team to conduct interviews and administer questionnaires.

Parental consent was granted for all students involved in the study. Students whose parents had agreed to have them participate in the study were sampled for inclusion in focus groups. Individual student focus group numbers were as low as three and as high as thirty participants. All students who had received parental consent to participate in the study were surveyed with the questionnaires.

Data recoding process. Data recording was undertaken in three main ways: direct transcriptions, digital recordings, and handwritten notes. One noteworthy element of the recording process was that two of the researchers projected their notes of focus group and individual interviews onto a screen as they were typed in real time. This enabled participants to view and validate that the researcher's notes had accurately captured their views. Two of the research team used digital recording devices and subsequently transcribed their notes.

Demographics of educator respondents to survey. The demographic information in this section relate to the educator, parent, secondary student, and elementary student questionnaire data. Specifics about each group are clustered and outlined in separate sections below. In some of the data sets the total of the percentages do not sum to 100% which is due to missing data for a particular demographic item.

Table 2 provides an overview of the total numbers of responses in each role group according to grade. There were a total of 2542 individual questionnaire responses in this study. Of the total 2542 questionnaires, 195 educator; 799 parent; 916 secondary students; and 632 elementary student questionnaires were returned. Within the information breakdown in the total demographics it should be noted that the numbers of teachers teaching certain grade levels were overlapping as some teachers were teaching multiple grades. There was only one parent survey returned per family.

Table 2
Total Number of Respondents in Each Role

Group	Elementary Survey K–6							Secondary Survey 7–12						Special Ed.
(*N* = 2542)	K	1	2	3	4	5	6	7	8	9	10	11	12	
Educator (*n* = 195)	12	20	19	19	30	30	32	30	25	27	77	78	75	15
Parent (*n* = 799)	52				431				263			307		
Secondary Student (*n* = 916)								196 (21.4%)	213 (23.3%)	152 (16.6%)	102 (11.1%)	107 (11.7%)	137 (15.0%)	
Elementary Student (*n* = 632)	0	0	0	35 (5.5%)	173 (27.4%)	202 (32.0%)	221 (35.0%)							

Note: These data represent overlapping categories and summing data may result in greater than total sample numbers (N = 2542).

Most educators who responded to the questionnaire were highly experienced with just over 69% having 7–30 plus years of experience. Almost 42% of educators who completed a questionnaire were in the 7–18 years of experience category, with the next largest group being the more experienced teachers in the 19–29 years at 20%. There was approximately 17% of the sample in the 4–6 years of experience range and rather even distribution across the 2–3 (~8%); 30 plus years (~7%); and only 5% who were novice teachers in their first year of teaching.

Table 3
Educators' Years of Experience Distribution

	Years of Experience	
Educator	**Frequency**	**Percent of sample**
0–1 years	10	5.1%
2–3 years	16	8.2%
4–6 years	33	16.9%
7–18 years	81	41.5%
19–29 years	41	21.0%
30+ years	13	6.7%

There was an uneven gender distribution within the educators' questionnaire sample (see Table 4), with 65.6% of respondents being female and just under a third (30.3%) being male.

Table 4
Educator Gender Distribution

	Educator Gender Distribution	
Gender	**Frequency**	**Percent of sample**
Male	59	30.3%
Female	128	65.6%

Table 5 displays the role designations in the educator sample. These categories were overlapping, because, for example, some assistant or vice principals were also teaching classes and noted they had both roles. There were 176 teachers representing 90% of the total sample. Some educator respondents held a leadership role such as curriculum leader (10.3%), assistant/vice principal (4.6%), principal (4.6%), and/or central office personnel (0.5%).

Table 5
Respondents' Role Designations

	Role	
Educator	**Frequency**	**Percent of sample**
Teacher	176	90.3%
Curriculum Leader	20	10.3%
Assistant/V Principal	9	4.6%
Principal	9	4.6%
Central Office	1	0.5%

Note: These data represent overlapping categories and summing data may result in greater than total sample numbers.

Table 6 represents an item in the survey designed specifically to collect information about the level of experience in administrative positions. There were two relatively equal categories, newer administrators with fewer than 5 years experience (3.6%) and those with 10–19 years of experience (3.1%). There were even numbers in the 5–9 and 20 plus years in an administrative role at 2.1% of the sample in each of these categories. Some of the curriculum leaders also indicated their years of experience in administration as well as those in the assistant/vice principal, principal, and central office administrative roles.

Table 6
Years of Experience in an Administrative Role

Years of Experience in Administration		
	Frequency	**Percent of sample**
Fewer than 5 years	7	3.6%
5–9 years	4	2.1%
10–19 years	6	3.1%
20+ years	4	2.1%

Note: These data represent overlapping categories and summing data may result in greater than total sample numbers.

Demographics of parent respondents to survey. As noted earlier, only one parent in each family was invited to complete the parent survey. More women (72.2%) responded than men (23.5%).

Table 7
Gender Distribution of Parent Respondents

Parent Gender Distribution		
Gender	**Frequency**	**Percent of sample**
Male	188	23.5%
Female	577	72.2%

Table 8 summarizes parents' reported level of school involvement. Almost half (49.9%) of the respondents reported having regular contact with the school. Over a third (35.7%) reported being an occasional volunteer with one fifth (20.5%) indicating they had little or no contact with the school. Almost one fifth (19.5%) reported being a regular volunteer. There were 71 (8.9%) school council members and 14 (1.8%) school board members who responded.

Table 8
Parent Level of School Involvement

Level of School Involvement		
	Frequency	**Percent of Sample**
Little or no contact	164	20.5%
Regular contact	399	49.9%
Occasional volunteer	285	35.7%
Regular volunteer	156	19.5%
School council member	71	8.9%
School board member	14	1.8%

Note: These data represent overlapping categories and summing data may result in greater than total sample numbers.

Parental education levels are summarized in Table 9. Just under a third of the parent sample (29.5%) held an undergraduate degree. Similarly, 26.2% of parents had a trade or vocational qualification, while 23.5% had completed high school and almost 11% had completed a graduate degree (master or doctorate). Only 4.8% had not completed high school.

Table 9
Parent Level of Education

Parent's Highest Level of Education

	Frequency	Percent of Sample
Did not complete high school	38	4.8%
High school	188	23.5%
Trade/vocational qualification	209	26.2%
Undergraduate degree	236	29.5%
Graduate degree (master's or doctorate)	87	10.9%

Table 10 displayed the proportion of parent survey respondents who speak English, French, or other languages in the home. The majority of the sample (92.5%) speaks English in the home, while 4% speak French, and one person indicated that the home language is a First Nations language.

Table 10
Language Spoken at Home

Languages Spoken at Home

Languages	Frequency	Percent of Sample
English	747	93.5%
French	32	4.0%
First Nations	1	0.1%
Other	136	17.0%

Note: These data represent overlapping categories and summing data may result in greater than total sample numbers.

Table 11 portrays parents' responses regarding having a child with special needs. Almost 76% indicated they did not have a child with special needs, while almost 10% reported having a child coded as special needs. Nearly 6% indicated they had a child with special needs who was not coded as such.

Table 11
Parental Report of Having a Child with Special Needs

Child with Special Needs

	Frequency	Percent of Sample
I have a child who is coded special needs	76	9.5%
My child(ren) has(have) no special needs	606	75.8%
I have a child with special learning needs but not coded	46	5.8%

Demographics of secondary student respondents to survey. Student demographics were less detailed and largely related to gender, language, special needs, and grade level. Table 12 shows that just over half (52.8%) of the secondary student survey respondents were female with 44.9% being male.

Table 12
Secondary Students' Gender Distribution

Secondary Student Gender Distribution		
Gender	**Frequency**	**Percent of sample**
Male	411	44.9%
Female	485	52.8%

Most (89.4%) secondary student respondents indicated they speak English at home, with 14.5% reporting speaking other languages at home. Only 0.4% reported speaking French at home and 0.2% reporting speaking a First Nations language.

Table 13
Secondary Students' Home Languages

Languages Spoken at Home		
Languages	**Frequency**	**Percent of Sample**
English	819	89.4%
French	4	0.4%
First Nations	2	0.2%
Other	133	14.5%

Note: These data represent overlapping categories and summing data may result in greater than total sample numbers.

Table 14 displayed secondary students' reports about having special learning needs. Most (86.1%) students indicated they had no special needs, with 7.3% reporting uncertainty about having special needs. Thirty-one (3.4%) students reported having special learning needs.

Table 14
Secondary Students' with Special Needs

Do You Have Special Needs?		
	Frequency	**Percent of Sample**
Yes	31	3.4%
No	789	86.1%
Don't know	67	7.3%

Demographics of elementary student survey respondents. Table 15 shows that more female elementary students (56.2%) than male students (40.5%) completed the elementary student survey.

Table 15
Gender Distribution for Elementary Students

Elementary Student Gender Distribution		
Gender	**Frequency**	**Percent of sample**
Male	256	40.5%
Female	355	56.2%

The majority of elementary students reported speaking English at home, with 17.6% reporting speaking other languages. Fourteen students (2.2%) indicated they spoke French at home.

Table 16
Elementary Students' Languages Spoken at Home

Languages Spoken at Home		
Languages	**Frequency**	**Percent of Sample**
English	559	88.4%
French	14	2.2%
First Nations	1	0.2%
Other	111	17.6%

Note: These data represent overlapping categories and summing data may result in greater than total sample numbers.

Table 17 summarizes elementary students' reports about having special needs. Most elementary student survey respondents (78%) indicated they did not have special needs, while 14.1% were not certain if they did or did not have special needs. Just 6% stated they did have special needs.

Table 17
Elementary Students' with Special Needs

Do You Have Special Needs?		
	Frequency	**Percent of Sample**
Yes	38	6.0%
No	493	78.0%
Don't know	89	14.1%

The following section outlines the demographic information related to the individual and small group interviews conducted as part of Stage Three data collection.

Demographic information for interview and focus group participants. There were 692 participants in focus groups and interviews as part of Stage Three data collection in schools throughout Alberta. Participation was voluntary and in response to invitations issued by school leaders. Table 18 summarizes the distribution of individual participants according to school type, location, and stakeholder role. Over the four school types—Kindergarten to Grade 12, elementary, middle/junior high, and senior high schools—there were 22 participants in formal leadership appointments such as assistant/vice principals and principals. There were 163 teachers and 462 students. There were also 46 parents who participated in interviews.

Table 18
Distribution of Interview and Focus Group Participants

	Participant Group						
School Type	**Principal**	**Assistant Principal**	**Teacher Elementary**	**Teacher Secondary**	**Student Elementary**	**Student Secondary**	**Parent**
Senior High	3	3		85		67	7
Middle/Junior High	3	4	17	15	56	226	17
Elementary	6	3	43		103		22
K–12			2		7	3	
Total (*N* = 692)	12	10	62	100	166	296	46
	22		**163**		**462**		**46**

Among the senior high school interview participants there were three principals and three assistant/vice principals, and 85 teachers. Additionally, 67 secondary students and seven parents of senior high school students participated in interviews.

Three middle/junior high school principals and four assistant/vice principals provided their leadership perspectives, while 32 teachers at the middle/junior high school level participated in interviews, as did 282 students. Seventeen parents at the middle/junior high school level also participated in the interviews.

Six elementary principals and three assistant/vice principals provided their views in the interviews. There were 43 elementary teachers who participated and 103 elementary students. Twenty-two parents who had children in elementary schools also were interviewees in Stage Three. There were two elementary teachers and seven elementary level students, and three secondary students in a K–12 school.

Data Analyses

Quantitative Data Analyses

The questionnaires were developed and printed in machine-scannable format. This format was used to increase processing speed and to ensure greater accuracy of data input into the software package, SPSS. Once all surveys were returned to the researchers, scanning occurred over two weeks and resulted in an SPSS file. All survey data were grouped by individual school stakeholder group and this ensured that the data for each school type remained intact. School type was included as a data code when all the data for the stakeholder grouping were compiled into an overall data set. A statistician worked with one of the researchers to create the labeled data file for each instrument. SPSS data were sorted into instrument sets, namely, educator, parent, secondary student, and elementary student survey data sets. The statistical software package, SPSS, was used to generate frequencies for each item. Compilation and checking of percentages were undertaken through exporting the instrument item sets, by section, into Microsoft Excel. From these total data sets, clustered data categories were prepared which compared parallel items across instruments. Where items were similar but not identical these were grouped but not combined. These data then were integrated with the qualitative data and sorted according to themes.

Qualitative Data Analysis

Interviews were transcribed verbatim during the actual interviews or from recordings. Each member of the research team compiled all of the interviews data into one secure online repository accessible. Qualitative data were analyzed through an iterative process with numerous opportunities for interrater reliability checks at every stage. The research team had two computers with each projecting to two screens (four screens in total), allowing research team members to view the original transcribed interview data (projected onto screens 1 and 2 so that different sections of the data set could be juxtaposed) and *concurrently* to code interview data (screen 3) in relation to demographic data (screen 4). The interview data for each stakeholder group—principal, assistant and vice principals, teachers, students, and parents—for the first six schools were coded jointly with all researchers present. Having all members of the team present at the initial coding process enabled numerous opportunities to contest and discuss the data coding. Once agreement on the coding was achieved, the researchers divided up the remaining school data sets and continued the coding. All research team members worked in the same physical location so that they could confer with each other. Once all school data sets were coded, all coding documents were compiled into a master document that contained all of the coded interview data.

This initial master coding document was used for the next iteration of coding for themes and subthemes. Each member of the research team reviewed the composite coding document independently. Overlapping themes were identified and subsequently refined through a roundtable discussion. Subthemes were identified and sequenced into storyboards using a software program called *Inspiration*. For each coded theme and subtheme a separate storyboard was developed with an accompanying range of illustrative quotations. Within each storyboard, sets of different shaped text boxes were used to code data according to the role and school type that each interviewee represented (see the appendices for an illustration of the shapes assigned to the various participant roles, e.g., parents, high school principals, and elementary students). With at least three of the four researchers present in all coding sessions, the storyboard components were reexamined to explore relationships within the themes and subthemes. The final coded storyboards were used to create an outline for reporting the Stage Three findings. Then each researcher wrote sections of the Stage Three findings.

Next, the clustered quantitative items were examined and linked to the appropriate theme within each storyboard. The quantitative data were merged with the qualitative data. As they wrote the Stage Three findings, all researchers referred to the original coding and interview materials to ensure that quotations were complete and that inferences remained accurate by overtly considering the context of the conversation within the original interview document.

Once the research team members finished writing the Stage Three findings they undertook a further level of analysis. Referring to the original project proposal, they reviewed all of the study findings to address the three study foci: optimal theory and practice in assessment, leadership implications, and professional development. All of the research team members participated in a roundtable discussion using the study findings as a point of reference. A set of guiding principles, based on study findings, were developed for each of the study foci. Recommendations were drafted through an iterative process of consultation and deliberation involving all team members. Then the team members shared the writing of the principles and recommendations. The literature review was updated and all other sections of the report were compiled. A final editing was undertaken to ensure sequencing, similarity of voice, tenses, and formatting.

Role of the Researchers

Patton (2002) identified the role of the researcher as the following:

> [t]he quality of qualitative data depends to a great extent on the methodological skill, sensitivity, and integrity of the researcher. … Skillful interviewing involves much more than just asking questions….Generating useful and credible qualitative findings through observation, interviewing, and content analysis requires discipline, knowledge, training, practice, creativity, and hard work. (p. 5)

Based on this observation it was obvious that the integrity and experience of the research team was essential to ensuring rigorous, high quality research. In this study, all members of the research team had well-established national and international research profiles and the team included a Canada Research Chair. Therefore, the possibility of introducing researcher bias due to inexperience or lack of methodological expertise was minimized.

At all stages of the study, there were separate reviews of materials to ensure interrater reliability. Additionally, during the study design and implementation and during data processing and analyses research team members engaged in numerous roundtable discussions which:

- created synergies not possible when researchers work alone,
- provided a context for challenging any preconceived conceptualizations, and
- assured greater consistency and coherence in study findings and reporting.

The team of four researchers represented the three larger universities in Alberta. The team had complementary expertise to the key aspects of the project: theory and practice in student assessment, leadership, professional development, and inclusive education. This enabled broad coverage of each aspect and ensured that the research was guided by the knowledge base in these fields. Additionally, the team had experience using a range of qualitative, quantitative, and mixed-method approaches.

Ethical Considerations

Research ethics was an essential component of this research. Separate university ethics approval was granted for each stage of the study by each of the three universities represented in the study. This involved providing information about the study, the research aims and questions, instruments, research procedures, and plans for informed consent by all study participants. Participation at every stage was voluntary, and confidentiality and anonymity were assured wherever possible. Clearly, focus group participants could not be assured of anonymity from the other group members, however, their data were protected from external scrutiny.

Separate ethics procedures were undertaken at the school district level. This frequently involved the research team completing the individual school board's requirements for ethics approval including supplying copies of each of the university's ethics approval documentation. Once approval was obtained at the school board level then entrée to the school was at the discretion of the principals. Only voluntary participation by educators, parents, and students was acceptable. Parental consent in writing for their child's participation was required prior to students' participation in focus groups. All participants could discontinue their participation at any time with impunity.

No individual, school, or district identifiers were included in the report to ensure that the participants were protected from identification. Any direct quotation that had identifying material either was excluded or was masked through changing gender and/or school identifiers.

STUDY FINDINGS

This section of the report includes, first, a description of the Stage Two findings of The Alberta Student Assessment Study and, then, a summary of the results of the Stage Three individual and small group interviews, plus the results of surveys administered to a sample of Alberta teachers, principals, parents, secondary school students, and elementary school students. It is important to note that Stage Two findings shaped the design and implementation of Stages Three and Four of the study.

Initial Focus Group and Interview Findings

Six themes emerged from a two-month series of focus groups conducted with representatives of Alberta Education, teachers, principals, superintendents, school board members, and parent councils. The themes included a range of issues and perceptions; however, it must be noted that the majority of the stakeholders were able to offer balanced perspectives overtly identifying and articulating positive aspects as well as challenges within the themes. Some of the study participants were able to see the positive and negative contributions of the stakeholders involved in the Alberta educational context. Unfortunately, where this was not the case, there was no mistaking the high levels of concern, even anxiety and suspicion, held by some individuals.

The six themes are illustrated in Table 19.

Table 19
Themes from Early Stage Focus Group Data

Politics of Assessment	Teacher Learning	Decision Making	Communication and Relationships	Leadership	Fairness and Equity
Policy	Professional development	Evidence-based decision making	Teachers	Alignment needed	Time to address core elements of curriculum
Accountability	Preservice education	Resource allocation, staffing, student placements	Parents	Policy	Minorities
Mistrust	Need mentoring	Formative	Students	Practice	Special needs
Confusion exacerbated by lack of knowledge base about terminology and how components fit (formative assessment/program evaluation/student evaluation)	Alberta Initiative for School Improvement projects	Summative	Postsecondary institutions	Teaching and learning	
	Alberta Assessment Consortium as professional learning opportunity	"Mission creep"	Employers	Curriculum	
	Teacher competence in student assessment	Lack of clarity about purposes of tests	Emotive nature of this topic	Instructional leadership	
	Professional learning communities	Multi-purposes for assessment data	Communication of results		
		What data can be used and at what level: system-wide, district, across schools, within classrooms, transitions			

Politics of Assessment

This theme encompassed issues related to policy, accountability at all organizational levels, stakeholder mistrust of each other, widespread confusion about student assessment, and a sense of professional responsibility to both the educational and wider communities.

Discussions of student assessment in Alberta contained a strong emotional element, perhaps understandable considering the implicit expectations for accountability for all roles across the education system. Reported emotions ranged from the positive ("belief in teachers' capacity to teach and assess well" and "confidence in the system") to the negative ("concern" to "mistrust" to "paranoia"). Confidence in teacher professionalism was evident among several stakeholder groups. "Concerns" included parents' expectations for information about their children's academic progress. "Mistrust" was used to describe several phenomena, including employer use of data, perceived lack of confidence in teachers' abilities to assess well, impact of school rankings published by organizations such as the Fraser Institute,[1] and other stakeholders' agendas and perspectives, resulting in "mistrust at best but perhaps sabotage at worst." "Paranoia" was evident, for example, in the attribution of "conspiracy theory perspectives." One participant explained it this way:

> *What I would like to see, that recognition there is nothing to be feared. The boogeyman under the table is of our own creation and is not necessary. It does a disservice to the development and maintenance of an excellent educational system.... If you fear the dust bunnies under the table you are doing yourself and your school a disservice and [also] the children you serve.*

A rationale for these views included the belief that "math phobia" was prevalent among many educators and hinders correct interpretation and appropriate use of the range of assessment data available in educational communities.

> *Fear of anything quantitative—hear things like numbers are fine but you can't measure everything—there are ways of assessing beauty, etc. We need not be afraid of measurement and assessing. Every time you cross the street you assess whether you have enough time to do that. This is how we make our way through the world and survive but there is this fear out there. We need through leadership and the universities to get people over this reluctance and fear...assessment is what we do. It helps us to make good decisions. Like our innate fear of snakes—even being bitten tells us something.*

Perceptions of educators' inadequate assessment knowledge and expertise in assessment contributed to calls for accountability and mistrust of teacher judgments. For example, participants cited instances of poor assessment practices, such as using assessment as a behavior management strategy or a punishment, and teachers "cheating" in the administration of the provincial standardized tests, which reinforced negative perceptions of teacher professionalism and calls for increased accountability. Additionally, participants frequently described teachers teaching to the test, even though the tests cover only a proportion of the prescribed curriculum. Further, some participants expressed concerns that Grade 12 Diploma Examinations precluded teachers attending sufficiently to all curricular components, this despite teachers' capacity to assess all program outcomes and to contribute 50% of student course-work grades to the Diploma Examination final grade (Alberta Education, 2007b).

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[1] The Fraser Institute states that it is an independent non-partisan research and educational organization based in Canada.

There was confusion about the validity of student assessment data, the purposes for collecting data, and the actual impact of poor provincial standardized test results. Study participants indicated the utility of national and international comparisons but cautioned against whole-scale adoption of assessment policies and acceptance of expert opinion when contexts are different, e.g., "high stakes testing," a contentious and value-laden term with a negative connotation exacerbated by America's *No Child Left Behind* policy. Study participants used this in ways that did not reflect in-depth knowledge of how it has very different meanings in different countries. Although study participants noted the potential value of studying and exploring assessment practices that work in other Western countries, they also cautioned against verbatim adoption of terminology and policies from one culture and using them uncritically in Alberta.

Further, tensions associated with student assessment led to a fear of publicly expressing controversial views and also to widespread calls for stakeholders to work together for "what is good for kids." The comment was made by one participant that the educational stakeholders should avoid "turning inwards and fighting each other" as it is "very counterproductive and undignified and we need to focus on the larger issue."

Other tensions highlighted by focus group participants included the perceived "stress on children" of testing, although other participants observed that "the stressors are associated with adults, not kids" and that "we use 'high stakes' to refer to 'high emotional stakes.'" For example, some described the PATs (Provincial Achievement Tests) as "high stakes" initiatives that set up a climate of stress within schools even though the PATs are intended to provide data about general school and curriculum effectiveness (Alberta Education, 2007a). Nevertheless, the adults' stress may be understandable when reports, true or not, are made that teachers with poor PAT results are disallowed from teaching a particular grade level or subject in the future.

Importantly, many of the stakeholders recognized pockets of excellence in student assessment practices. Further, some but not all stakeholders, manifested a strong sense of professional responsibility to their particular educational communities and also to secondary stakeholders such as business, industry, and the social service sector, for example.

Teacher Learning

Teacher learning encompassed four subthemes: (1) preservice education, (2) professional development, (3) mentoring, and (4) professional learning processes that involved student teachers, novice-to-experienced teachers, teacher leaders, school and district administrators, and other community members. These four subthemes included a province-wide school improvement project (Alberta Initiative for School Improvement, AISI) and involvement in initiatives sponsored by the Alberta Assessment Consortium (AAC). Collectively, the components of this theme indicated a strong and urgent need for more and more effective learning opportunities related to student assessment.

There was a clear polarization of views across all representative groups about teacher knowledge and expertise in good assessment practices. The desire for greater convergence of theory and practice was expressed. Research-based practice was valued and participants endorsed initiatives, such as AISI (Alberta Education, 2008a) and regional consortia, which promoted the development of teacher learning in this area.

Study participants noted the challenge of time, particularly the perceived need to focus on core elements of the provincial curriculum that were more likely to be included in the Provincial Achievement Tests and Diploma Examinations. Time concerns also included workload alleviation for teacher leaders to support others in developing their assessment literacy. As well, continual implementation of a range of mandated initiatives exacerbated educators' perceptions of scarcity of time.

Participants considered preservice teacher education programs inadequate and, in some instances, universities were thought to model inappropriate assessment processes. As a result, the need for professional development was seen as acute, particularly in the area of "statistical literacy," sound assessment strategies, and deep understandings of quality assessment. Participants called for greater access to effective school-based professional development, rejecting "one-shot workshops," and desiring more opportunities for collegial "rich conversations," all on an ongoing basis. From the administrative perspective, participants raised questions about how to engage all teachers and to motivate those who resist professional learning.

Decision Making

This theme related to assessment-related decision-making at the classroom, school, district, and provincial levels. The school level involved resource allocation, staffing, and student placement. Classroom-related decision-making included formative and summative judgments. An issue that permeated all levels was a perceived lack of clarity about the purpose and data collection uses.

Study participants consistently iterated concern about the perceived expansion of the purposes of provincial standardized testing—accountability, curriculum revision, resource allocation, targeting for professional development—a phenomenon they described as "mission creep." An associated issue involved provincial standardized testing data not being returned to schools in a format that educators perceived as informing teaching and learning, thus reinforcing their perceptions of the tests' lack of value within the educational process. Participants expressed the desire to be able to use assessment data to inform transitions from class-to-class, school-to-school, and school-to-external institution. Additionally, participants' poor understanding of the plans for implementation and use of achievement test data, plus the wide perception that Grade Level of Achievement Reporting (GLAR) was implemented poorly, albeit in a highly charged atmosphere that made implementation and communication difficult, contributed to an apparent overall confusion surrounding student assessment.

A more positive perspective of GLAR reflected potential communication benefits:

> *With the First Nations population, there are often lots of barriers that students must get around to get to school....We tried to create a more level playing field so more people had the same level of information and understanding. Lots of barriers, including funding, so we collaborated with Indian and Northern Affairs Canada to see if we can meet the needs of students on reserves better. So with GLA [GLAR] we thought it might be a way to share information...when a student moves from a FN [First Nations] school to a provincial school.... If they have a GLA that is carried to the provincial school, then the receiving school is better informed.*

Although this study focuses on student assessment in its broadest sense, it is important to highlight what members of one focus group articulated. That is, of the 16 measures within Alberta Education's *Accountability Pillar*, the provincial accountability framework for education, only four measures overtly relate to provincial standardized testing (Alberta Education, 2006a). Therefore, although student assessment measures are important, a balanced perspective needs to be taken and an overemphasis on student assessment ought to be avoided and this is evident in the current *Accountability Pillar*.

Communication and Relationships

Effective communication among all stakeholders was a major theme. Key stakeholders were described as teachers, parents, students, postsecondary institutions, and employers. The emotive dimension of student assessment emerged as a strong component of this theme, as did the need for more frequent, timely, and clear communication of student achievement.

Parent council representatives and educators both stated their frustration with ineffective communication that fosters "a lack of trust in teacher judgment" and "the distancing of parents from schools." The converse argument also emerged regarding the difficulty associated with encouraging some parents to engage in dialogue with their children's school and teachers.

> *When it comes to parental involvement, one of our main pushes... has been to invite parents to be more involved in the education of their students. We also know there is a need for information to parents about standardized and classroom assessment.*

Parents were receptive to the possibility of participating with teachers in professional development that focused on extending their understandings of good assessment. Overall, parental perspectives focused on their desire for their children to experience quality teaching. Parents observed insufficient recognition of the role of students in assessment and the impact of teacher communication effectiveness on students' motivation.

> *If we could put the assessment...into the hands of students—we need to move full bore on that one so students can take control of their own learning and assessment is part of that. Damn the torpedoes on that one!*

There was some doubt that student achievement was being reported accurately. Parents identified deficiencies in reporting formats, citing problematic use of "educational jargon" and a lack of comparative information about their children and peer groups. Reporting was perceived to be too limited, not capturing students' "social and emotional growth." Further, representatives of several stakeholder groups, not only parents, noted that discrepancies were evident between what parents and teachers know about children's achievement. Additionally, another cause for concern arose when teachers did not report the provincial standardized achievement tests' preliminary results, particularly when data were used to rank schools. In turn, educators noted the delayed communication to schools of provincial standardized achievement results impeded the use of the data, for example, in assisting with student transitions between grades, across schools, to postsecondary institutions, and/or into the work force. However, teachers of grades 6 and 9 are required to mark multiple-choice items and to report results to parents before the end of the school year, which means teachers of those grades have that information immediately after students write provincial achievement tests.

Grade Level of Achievement Reporting emerged as a problematic initiative due in part to implementation challenges and a perceived lack of clarity about the purpose and intended use of GLAR data. For instance, Alberta Education participants described GLAR as a tool for enhancing communication among school personnel and parents; however, some teachers perceived the GLAR initiative as ambiguous and appeared to lack confidence in their ability to report categorically student achievement outside of the grades in which teachers, themselves, have experience. For this initiative to be implemented more successfully and effectively, then professional development will need to facilitate collegial dialogue across grade levels and subject areas.

Instructional Leadership

Focus group participants noted the need for strong, responsible provincial leadership in establishing and maintaining high quality educational programs. They then stated the need for leadership at the provincial government level "to filter down to the other levels." They acknowledged the quality of the Alberta education system, linking that with ongoing curriculum review, and "maintenance" of standards through provincial student assessment programs, providing "a bulwark against grade inflation" so that postsecondary institutions "know what 70% means which advantages the Alberta student." It was reported that Deans of Science across the nation recognize "the competencies of students in what they bring to their first year of studies."

Participants also expressed a widespread need for greater use of assessment data for "instructional leadership" purposes by principals. They indicated the need for stronger alignment among policy implementation, curriculum planning, and teacher practice, thus promoting improved teaching and learning. Further, it was acknowledged that Alberta teachers have demonstrated considerable capacity to adopt innovative teaching strategies but not innovative assessment practices. Therefore, a critical focal point for instructional leaders is in the area of improvement and enhancement of student assessment practices.

> *[There is a] false sense out there that if you make a change [in assessment practices] then the marks will go down, even though [evidence]...suggests that marks do not go down but engage students in meaningful assessment practices, help kids get engaged in the subject matter, and they can do really, really well.*

The importance of principals, in particular their role as instructional leaders in schools, was recognized in most focus groups. Participants indicated that a "climate of fear" around student assessment "represents a failure of leadership." Further, there was a range of beliefs about the requisite knowledge of principals, including "assessment literacy," because some participants indicated that principals needed only to support skilled teacher leaders while others were convinced that principals themselves must possess in-depth understanding of assessment. However, study participants noted the generally insufficient level of principal preparation in the area of leading assessment, both in graduate programs and in ongoing professional development. The importance of ongoing support for teacher leaders was cited as these individuals are future principals.

Educational leaders, particularly in rural and remote schools, face the additional constraint of maintaining a strong professional knowledge base about student assessment because of high levels of staff turnover across schools and among provinces. This phenomenon is exacerbated when the leadership within the school is disrupted due to administrative transfers.

Finally, leadership is crucial in the appropriate use of data, although principals may face a range of challenges. For example, preoccupation with "high-stakes tests results," may encourage micromanagement styles that undermine teacher morale. That is, principals considered the need to be "gatekeepers" and to "boycott ministry initiatives" in the belief that they are protecting their staff from the misuse of assessment data and refocusing them on student learning, although such reactions may increase rather than ameliorate tensions associated with student assessment in Alberta.

Fairness and Equity

This eclectic theme covered diverse issues such as problematic assessment practices related to students with special needs and those from cultures outside the mainstream and, additionally, the complexity of assessing for society's diverse expectations for all students. For example, participants expressed concerns about the wealth of information available from Alberta's provincial standardized tests that highlights achievement gaps between mainstream student populations and minority groups such as First Nations, Métis, and Inuit (FNMI) students and, usually focusing on deficiencies, tends to obscure learning strengths.

> *When it comes to standardized assessment there is often a negative feeling that the tools do not reflect students' cultural backgrounds and prior experiences and knowledge. Are the tools meaningful and are the assessments meaningful? Meaningful learning and meaningful assessment always go hand in hand.... From my experience it often is that the standardized assessments are seen as culturally biased.... Is there any way that we could create a test that is relevant and effective for the Blackfoot around Calgary and use it in Whitehorse?*

Even though evidence of this worrying phenomenon has existed for many years, little progress has been made to address it. This relative lack of progress in supporting at-risk children was noted in the context of English as a Second Language (ESL), refugee, and special-needs student populations: "Our assessment practices should be effective for all students, special needs, and ESL. We need to focus on them as well."

Participants highlighted the need for greater acceptance among educators of the appropriateness of accommodating students' different abilities to participate in assessment practices:

> *Failure is not an option.... How much failure data do we have to have about a student before we intervene? What kind of compensation tools? We put a premium on things you can store in your head. If I need a tool to help with a task then I'm not as smart as another student. In terms of special education students we have to start examining those types of issues.*

Participants recommended that incremental achievement milestones for these students be emphasized as opposed to highlighting deficiencies evident in provincial standardized test results. They recommended establishing communication systems that better linked students' achievement records to their current locations, a particularly important initiative in the context of highly mobile students. Also, study participants noted that provincial standardized assessment instruments too often use terms and concepts that are culturally inappropriate or foreign for many students.

One of the key stakeholder groups noted the complexity of assessment, resulting from the "different paradigms" held by society. Focus group participants identified four "paradigms," with the first being the most obvious: assessment of knowledge. The second is the view that schools should prepare students for their places in society and to manifest "good citizenship." The third paradigm is the perspective that schools should "prepare students for the world of work" with the requisite employability skills. The final paradigm subscribes to "developing the natural talents of students." These diverse paradigm perspectives about what should be included in student assessment and how the assessment should be conducted create constraints in establishing productive dialogue that values and respects differing viewpoints.

Stage Three Qualitative and Quantitative Findings

This section of the report details the findings of Stage Three in the Alberta Student Assessment Study. Survey data, plus the information gathered during individual and group interviews with educational stakeholders across the province. The following themes were drawn from the combined quantitative and qualitative data: priorities of assessment, teacher and classroom-based assessment, provincial assessment, grade level of achievement reporting, decision making, leadership, professional development and teacher knowledge, preservice preparation, communication and relationships, fairness and equity, and the politics of assessment.

The surveys that were administered to students, teachers, and parents indicated very strong support across roles for most of the purposes of student assessment that were identified in Stages One and Two of the study. Table 20 provides an overview of responses from educators, secondary students, and parents to the question, *How important is each assessment purpose?* Respondents in all roles assigned very high levels of importance to the following purposes of assessment:

- Promote high standards
- Focus on provincial curriculum
- Promote improvement
- Inform students and parents
- Inform teachers
- Inform school district staff
- Identify professional development needs of teachers

Slightly more modest levels of importance were assigned to the purpose of motivating students, although students themselves saw the purpose of motivating students as more important (83.6%) than did their teachers (69.7%) and parents (72.8%).

Appearance of the word "evaluate" in a statement of purpose elicited patterns different from responses to other items. For example, the purpose of "to evaluate students" was seen as very important or important by 97.4% of educators and 91.1% of parents. However, the purpose "to rank students" demonstrated disagreement; only 17.4% of teachers saw this purpose as important, 42% of students said this was important, while 58.4% of parents believed that ranking students is an important or very important purpose of student assessment. To some degree, disagreement makes sense; that is, it can be argued that teachers would see that they have a responsibility to help individual students achieve their potential, rather than to rank them. Over half of students themselves thought that ranking students was of little or no importance, perhaps because they correctly perceive that most students have potential to do well in school and after graduation from Grade 12. Given that over 58% of parents see ranking students as an important or very important purpose of assessment, it could be argued that they represent a broader perspective from that held by educators or students. That is, they may perceive that individual students indeed are ranked on the basis of student assessment by educators for purposes of admission to particular school courses and programs, access to support services that are within and also external to the school, inclusion in enriched educational experiences, assignment to groups of students who share particular interests or learning needs, inclusion in public celebration rituals such as an honour rolls and school assemblies, admission to postsecondary institutions, and success with scholarship applications, for example. As well, employers rank applicants on the basis of education and achievement levels. The practice of ranking students is unlikely to disappear quickly, given that educational resources in schools and postsecondary institutions are finite, so student ranking is an aspect of student assessment that merits ongoing attention by educational leaders, teacher educators, and professional developers.

The word "evaluate" in survey items led to other patterns of disagreement. For instance, parents assigned much higher levels of importance to these purposes than did educators:

- Evaluate teachers
- Evaluate schools
- Evaluate school districts
- Evaluate the provincial education system

There are at least two explanations for these differences between the views of educators and parents. One is that educators do not believe that the results of classroom-based assessment and provincial standardized testing are valid indicators of quality of teaching, good schools, or well functioning school districts. For instance, a Grade 9 teacher in a suburban school stated that assessment data should not be used to assess teaching or schools:

> *[It is an] injustice to schools. We know certain schools are going to be lower for various reasons. Economics play a factor. Sometimes it can be the teaching and maybe leadership. It can be used in dangerous ways [that are] detrimental to a community and then the enrollment will drop.*

Parents, on the other hand, might believe that, if student assessment results merit use in decisions with lifelong implications being made about their children, then assessment results also may be valid for assessing the educational value of what their children experience in classrooms, schools, and school districts.

A second and similarly controversial explanation is that educators do not wish to be held accountable for how their students achieve in school. A suburban elementary teacher observed, "A big gap is accountability as a profession. We don't hold our teachers accountable enough."

Others no doubt will offer explanations for the differences between the views of parents and educators. However, the differences are observable and they speak to the range of perceptions held about some assessment purposes. Nonetheless, it is noteworthy that there is such commonality in the importance ascribed to the purposes of assessment included in Table 20, with the exception of using assessment results to evaluate teachers, schools, school districts, and the provincial education system.

Table 20
Priorities of Assessment

Item	**Educator**			**Student**[2]			**Parent**		
How important is each assessment purpose?	**% VI/I**	**% LI/U**	**% DK**	**% VI/I**	**% LI/U**	**% DK**	**% VI/I**	**% LI/U**	**% DK**
Promote High Standards									
To promote high academic standards	92.7%	5.8%	1.6%	83.4%	8.1%	8.5%	90.0%	6.8%	3.2%
Focus on Provincial Curriculum									
To maintain focus on provincial curriculum	90.3%	6.3%	1.1%				85.5%	10.0%	4.5%
Promote Improvement									
To improve learning	89.7%	8.8%	0.5%						
To improve teaching				84.2%	9.3%	6.5%			
To improve student achievement				91.8%	4.7%	3.5%			
Evaluate Students									
To evaluate students	97.4%	1.5%	0.5%				91.1%	6.7%	2.2%
To rank students	17.4%	81.6%	0.5%	42.0%	51.0%	7.1%	58.4%	38.0%	3.6%
Motivate Students									
To motivate students to learn	69.7%	29.9%	0.0%	83.6%	12.9%	3.5%	72.8%	24.1%	3.1%
Inform Students and Parents									
To inform students	97.4%	2.1%	0.0%				90.6%	8.0%	1.4%
To inform parents	96.9%	2.1%	0.0%				93.5%	4.7%	1.8%

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[2] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Item	Educator			Student[2]			Parent		
How important is each assessment purpose?	**% VI/I**	**% LI/U**	**% DK**	**% VI/I**	**% LI/U**	**% DK**	**% VI/I**	**% LI/U**	**% DK**
Inform Teachers									
To inform teachers	97.4%	1.6%	0.0%				93.8%	4.3%	2.0%
To inform decision making about individual students				79.9%	10.5%	9.6%			
To identify students with special needs				77.5%	10.2%	12.2%			
To identify students in need	93.3%	5.2%	1.0%				90.6%	5.1%	4.3%
Inform School District Staff									
To inform school district staff	78.5%	18.2%	2.1%				82.0%	13.7%	4.3%
To identify schools in need	81.5%	16.0%	2.1%				89.1%	6.4%	4.6%
To identify schools that need support				81.1%	10.2%	8.7%			
To identify staffing needs	71.8%	23.2%	4.6%	70.2%	18.6%	11.3%	84.3%	9.0%	6.7%
To inform decision making about teachers				77.6%	11.9%	10.5%			
To inform decision making about schools				76.2%	13.1%	10.7%			
Inform the Public									
To inform the public	49.2%	46.1%	4.1%				61.8%	32.9%	5.2%
Identify Professional Development Needs of Teachers									
To identify professional development needs	88.7%	10.3%	0.5%						
To identify teacher's learning needs				71.4%	17.7%	10.9%			
To increase teachers' assessment knowledge and skills				77.8%	11.2%	11.0%			
To identify professional development needs							88.2%	6.5%	5.3%
Evaluate Teachers									
To evaluate teachers	66.2%	33.0%	0.5%				88.5%	9.2%	2.4%

Item	**Educator**			**Student[2]**			**Parent**		
How important is each assessment purpose?	**% VI/I**	**% LI/U**	**% DK**	**% VI/I**	**% LI/U**	**% DK**	**% VI/I**	**% LI/U**	**% DK**
Evaluate Schools									
To evaluate school	60.5%	39.2%	0.0%				86.4%	11.0%	2.6%
To rank schools							65.4%	30.8%	3.8%
Evaluate School Districts									
To evaluate school districts	55.4%	43.8%	0.5%				78.2%	17.6%	4.2%
Evaluate Provincial Education System									
To evaluate provincial education programs	70.3%	25.9%	3.1%						
To evaluate the provincial education system	65.6%	29.7%	3.1%				85.4%	10.4%	4.2%
To inform decision making about the provincial education system				71.0%	15.4%	13.6%			

Note: Data for the items were clustered according to very important/important, little importance/unimportant, and don't know. Percents were calculated using the total number of responses for each item.
VI/I = Very Important/Important, LI/U = Little Importance/Unimportant, DK = Don't Know

Teacher and Classroom-based Assessment

Over the past few decades the purposes and approaches to teacher and classroom-based assessment have shifted dramatically. In Alberta the direction for change has been influenced by province-wide initiatives such as the Alberta Initiative for School Improvement (AISI), documents such as the *Rethinking Classroom Assessment with Purpose in Mind* (2006) and the *ATA Magazine* Volume 89, Issue 3, plus organizations such as the Alberta Assessment Consortium.

Some change, whether top-down or bottom-up, can be unsettling. An elementary principal expressed her thoughts about changes in district expectations for student assessment:

> *It's easier to do the old style of assessment and feel like you are doing your job than it is now. It almost puts you to the point of stressed because you now understand the depth of what you need to be doing to give the kids. ... Kids need to demonstrate what they know in different ways. ... Of all the changes that have come down the pike, this assessment piece is the one that will have the biggest impact on student learning and that's why I'm so passionate about it. It's not like whole language thing that came and went and left kids who can't read.*

The following excerpt from an interview with a principal from a charter school added further insight as to how educators are viewing current changes in student assessment:

> *Student assessment can help students to learn, [but] right now it doesn't. It's one of our biggest weaknesses. The confusion of assessment 'for' and 'of' learning and confusing of formative and evaluative components is a challenge. Historically teachers and students have focused on the evaluative not the formative. As we shift that focus it can become a better tool for helping students learn. The more we put students in the assessment design, and development and self-assessment, it motivates the students. The more we have it as authentic, the more helpful to students' learning. More mature students get it. Even if you just put a number on the test they will go through the answers....So it's a question of how can we change assessment so we get most students there? Also this approach helps to direct our teaching.*

This section of the research report summarizes the analyses of quantitative and qualitative data provided by educators, parents, and students in their responses to surveys, focus group dialogue, and individual interviews. Results have been organized according to six subtopics including contested assessment-related practices, multiple measures and methods, student feedback and motivation, curricular alignment, consistency and coherence, and ongoing improvement. Even though participant respondents gave numerous critical comments about current teacher/classroom-based assessment practice, the data generally suggest that many of the elements associated with effective student assessment have been or are currently being implemented.

Contested assessment-related practices. Qualitative data revealed considerable controversy over the actual focus that assessment takes. Elementary teachers, for example, held that "marks should reflect understandings, not attitude or effort" and there is a need to "focus on content, not neatness." Secondary teachers cautioned there should be a separation of "behavior from academic and actual learning" and "don't use timed tests, [because it] produces anxiety." In agreement, an elementary student stated that he "didn't like timed tests" and another reported that "tests must be signed by parents or you get zero." A further concern raised by an elementary student was that "teachers play favorites and sometimes think you are cheating when you are not." In a similar vein, secondary students admonished that "the system is for teachers, not students," and "Teacher bias is a real problem. Students who are favored get better marks." Concerning the behavioral side of assessment focus, secondary students reported, "grades are reduced for misbehavior" and "if a student is disruptive then grades go down." Another stated that he wanted "no marks taken off for late work." The following excerpt from a focus group adds insight to the perceptions of high school students:

> *Some teachers say to students, "What, you don't get that?" and then that shuts them down and they get in trouble for not going to get help.....He says why don't you come in for help but he doesn't want to help.....Teachers favor people a lot and give people different marks. I have a teacher who does not like me and gives me worse marks. We were doing [some] group type of work with the same information and research, and my friend gets 100% and I get a failing grade and yet the work is the same.*

Classroom-based assessment was also perceived to be a form of reward and punishment that teachers deploy at their discretion. The bulk of the comments associated with this perception come from students, and most of these were negative toward the idea of grades reflecting behaviors. Both elementary and secondary students voiced displeasure at teachers assigning zeros and, as one secondary student suggested, it is "unfair to get zero on homework not done" and an elementary student stated, "Zeros are cruel." Interestingly, some elementary and secondary teachers expressed similar distaste for giving zeros. Another area of concern was about having second chances. One senior high teacher reported that he offered "numerous opportunities to complete assignments and retake exams" and both elementary and secondary students were most positive about such practices. As one secondary student put it, "[I] like second chances to complete assignments and tests." Another contentious issue was late penalties. Elementary students expressed their dislike of having "marks taken off for late work" and one parent informed that she was "not at all OK with late assignment penalties." In agreement one high school assistant principal favored the elimination of "late penalties for assignments." On a related point, an elementary student declared he wanted "marks for effort" and a secondary student didn't want to "lose marks for incomplete homework." Another student said, "Once you get parents involved teachers lighten up."

Several issues were raised with respect to perceived inappropriate test preparation practices. Students most often cited note copying. An elementary student volunteered that he was "frustrated with copying notes from the board" and secondary students complained that "too much copying notes means students can't integrate or synthesize" and they "don't like copying from the board or [from] PowerPoint slides." Other secondary students commented they had "too many tests" and they "don't like teachers using the same tests for years." An elementary student raised a concern about having "too many tests in one week, for example, nine tests" and another offered that they had to do "lots of practice tests for PATs." In regard to the latter, parents were also afraid that "PATs cause pressure" and that "PATs cause teaching to the test." Whether assessment is contested or not, there was strong support for the use of multiple assessment measures and methods, and this is described in the next section.

Multiple measures and methods. Accepting that top-down and bottom-up change initiatives have influenced teacher and classroom-based assessment generally, the researchers were interested in gauging the general level of trust held for current practice. As shown in Table 21, educator and parent responses to the survey item *I trust the results of teacher-made assessments* was quite positive with 85.6% of educators and 79.7% of parents showing agreement or strong agreement. Perhaps indicative of this trust, one parent declared, "Assessment is just a normal part of life." In response to a similar survey item *I trust the tests teachers make,* students indicated 75.3% agreement or strong agreement, although 1 in 5 students do not. In this section we explore the types of measures typically used by teachers in the classroom.

Table 21
Teacher Tests and Trust

Item	Educator			Student[3]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
I trust the results of teacher-made assessments	85.6%	10.3%	4.1%				79.7%	12.8%	7.5%
I trust the tests teachers make				75.3%	19.5%	5.3%			

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know.*

Table 22 provides a summary of educator, secondary and elementary student responses to the survey item, *How often is each assessment tool or practice used?* Interesting discrepancies emerged among the responses. Elementary students had fewer choices in comparison to secondary students and responses clustered most highly around individual and group work, homework, worksheets, and artwork. Secondary students' response for the most frequent practices ranked from highest included teacher-constructed multiple-choice tests, homework, teacher-constructed short and/or long answer tests, individual and group projects. Educator response for the most frequent practices ranked from the highest included: observe students at work, tasks relevant to real-world situations, individual projects, assess higher order thinking, and self-evaluation. It is of interest to note there is general student agreement on homework, individual and group work as the most often used classroom practices, whereas educators had only one matching choice, individual projects. Elementary and secondary students perceived homework to be an often-used practice (96.8% and 90.8% respectively), whereas educator response was in the moderate range (66%). There are two choice items that are remarkably different for educators and secondary students. Most of the secondary students (91.8%) chose *teacher-constructed multiple-choice tests* as the most widely used practice, whereas only 51.1% of educators did. Educators ranked *Observe students at work* as their most frequently used practice (91.6%), whereas only 37.7% of secondary students did.

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[3] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Table 22
Assessment Tool or Practice Frequency

Item	Educator			Secondary Student (Grades 7 through 12)			Elementary Student (Grades 4 through 6)		
How often is each assessment tool or practice used?	**% A/O**	**% R/N**	**% DK**	**% A/O**	**% R/N**	**% DK**	**% A/S**	**% N**	**% DK**
Teacher-constructed multiple-choice tests	51.1%	47.9%	1.1%	91.8%	6.8%	1.4%	80.7%	10.4%	8.9%
Commercially-produced assessments	39.7%	57.7%	2.6%						
Publisher's tests				15.6%	41.8%	42.7%			
Portfolios	58.4%	40.5%	1.1%	17.7%	64.6%	17.6%			
Collections of student work							89.1%	2.7%	8.2%
Self-evaluation	73.2%	25.8%	1.1%						
Self-assessment				46.9%	47.7%	5.4%			
Oral presentations	67.0%	31.9%	1.0%	58.7%	37.7%	3.7%	83.8%	8.1%	8.1%
Assess according to a school or district mark distribution guideline	29.8%	59.6%	10.6%						
Compare to a set of standards				53.9%	19.1%	27.0%			
Group projects	64.2%	34.7%	1.1%	78.4%	19.5%	2.1%			
Group work							95.2%	3.8%	1.0%
Timed tests	31.1%	66.8%	2.1%	44.3%	51.2%	4.5%	66.3%	27.3%	6.4%
Individual projects	82.5%	15.9%	1.6%	83.7%	14.6%	1.7%			
Individual work							97.1%	1.0%	1.9%
Observe students at work	91.6%	8.4%	0.0%	37.7%	43.8%	18.5%			
Anecdotal records	66.8%	31.1%	2.1%						
Homework assignments	66.0%	33.0%	1.0%	90.8%	6.8%	2.4%			
Homework							96.8%	2.4%	0.8%
Compare informally to students from previous years	19.4%	73.8%	6.8%	30.7%	49.3%	19.9%			
Negotiate with students about assessment tasks	40.8%	53.4%	5.8%	43.4%	38.7%	18.0%			
Tasks relevant to real-world situations	85.3%	11.6%	3.2%	47.6%	43.2%	9.3%			
Reflective journals	52.4%	46.6%	1.0%						
Student journals				28.6%	65.3%	6.2%			

Item	Educator			Secondary Student (Grades 7 through 12)			Elementary Student (Grades 4 through 6)		
Teacher-constructed short and/or long answer tests	76.4%	20.9%	2.6%	85.8%	11.6%	2.6%			
Students assess one another	35.8%	61.1%	3.2%	22.8%	67.7%	9.5%			
Student involvement in rubric development	46.1%	51.8%	2.1%						
Student involvement in setting up marking guides				19.3%	63.7%	17.1%			
Assess higher order thinking	81.1%	14.2%	4.7%						
Assess knowledge recall	72.3%	26.7%	1.0%						
Factual knowledge tests				41.4%	35.6%	23.0%			
Drill and practice exercises	58.9%	40.0%	1.1%						
Performances	67.9%	29.5%	2.6%	38.5%	43.9%	17.6%	62.9%	21.4%	15.7%
Exhibitions				12.1%	55.8%	32.1%			
Worksheets							96.4%	1.1%	2.5%
Reading aloud to teacher							78.4%	14.6%	7.0%
Art work							90.6%	6.1%	3.3%
Teacher analyses of assessment tool effectiveness	68.1%	27.2%	4.7%						

Note: Data for the items were clustered as "Always/Often," "Rarely/Never," "Don't Know," and, in the case of elementary student responses, as "Always/Sometimes," "Never," and "Don't Know." Percents were calculated using the total number of responses for each item.

A/O = Always/Often, R/N = Rarely/Never, DK = Don't Know, A/S = Always/Sometimes, N = Never

Qualitative data generally confirmed survey findings. As one elementary principal noted, "Students should be able to demonstrate learning in different ways," and an elementary assistant principal expressed, "wanting to give a choice to the class for assessment." Accordingly a variety of assessment approaches in the classroom would be expected. Elementary and secondary teachers and principals all reported the use of a variety of assessment measures including: rubrics, self-reflections, technology mediated assignments, checklists, projects, peer assessment, peer teaching, oral presentations, classes marking their own quizzes, multiple-choice, short-answer, observation, performance assessment, stories, paragraphs, lots of writing, homework, and exemplars. The most often cited strategy was using rubrics. The following quotation from an alternative high school teacher sheds some light on how teachers perceive of and use multiple assessment measures:

> *We try to address the individual learning needs. If a student wants to do something different e.g., podcast, MP3, writing assignment, they could do that. We have the technologies in place to do different kinds of assessments like that right now. ... Our high school next door, I use the assessments/tests they do, but sometimes we give them to students in a different way. My students in Social Studies last year, everyone passed, and they aren't there every day.*

Comments offered by students and parents were in agreement with the notion of multiple assessment measures, and individual students expressed a preference for specific approaches such as open book exams, multiple-choice tests, and self-assessment in physical education.

Interview and focus group participants also offered some comments concerning assessment methods. An elementary assistant principal, for example, spoke to the need for "multiple chances for assignment completion." One elementary student said he "liked constructing test [items] and [his] teacher selects some to use, and another mentioned his desire to have "access to study materials at home, [like] texts." A secondary student offered that he "liked group work but not the group marks." Other home-schooled secondary students "liked the flexibility and independence [of self assessment]." By far the most preferred strategy, and the most often mentioned, was to incorporate technology into general classroom practice. Classroom technology use included SmartBoards and "handhelds," as one elementary teacher noted. Similarly an elementary student declared he wanted "technology access to do the work," e.g., computers, SmartBoards, iMacs, but another secondary student was concerned that "not all kids have access to the internet." Secondary teachers were keen on having access to more computer-adapted assessment, possibly in the format of a provincial standardized test item bank. As described in the following section, an important feature in teacher and classroom assessment is the feedback provided to students and motivation.

Student feedback and motivation. Interview data included several comments regarding the nature of student feedback, preferences for feedback, and how feedback influences student motivation. An excerpt from an interview with an elementary assistant principal refers to the notion of assessment for learning (AFL) and the link to feedback:

> *Lost our sense of what AFL really is. Buzz word. Need clarification, getting back to how we give students feedback, as much work in this is continuing to improve planning and instruction, so it is a process of continual improvement.*

On the matter of clarity of feedback, elementary teachers held that two important strategies are to "involve the students in assessment design" and to use "kid-friendly assessment language." Several students raised concerns about clarity. One elementary student stated that, "teachers don't really tell you if the PAT marks go on your report card" and another felt that "assignment instructions ought to be clear." For secondary students, a desire for "advance notice of tests" and for teachers to "make expectations clearer" was reported. The matter of assessment frequency was raised with an elementary teacher stressing the importance for "many small formative, diagnostic assessments" and in agreement, an elementary student wanted to have "not one big test but more tests." One parent who "preferred specific grades over descriptors" expressed her concern and an elementary student indicated his "uncertainty about how marks are determined." One secondary student was adamant that "teachers should re-teach if students don't understand." Along with these concerns, participants offered many comments regarding feedback preferences.

Even though most participants articulated a strong desire for student feedback, indications were that some aspects of this process could be improved. As one senior high teacher admitted, "some exams/quizzes are handed back but not most. You want to reuse questions every year." Students at all levels, parents and even other teachers expressed opposition to this practice. For example, a secondary student observed, "Teachers don't always let us see the exam after the fact so it's impossible to learn what you did wrong." In agreement a parent reported, "Teachers don't return tests and they should so students can improve" and one elementary teacher cautioned, "Don't use tests over and over." Elementary and secondary students expressed that they preferred, "detailed" and "timely" feedback, and they "want feedback on how to do better." Sentiments of a Grade 5 student about feedback and timeliness are well illustrated in the following quotation:

> *I don't like that we don't get our tests back very quickly in some of the subjects. I kind of wish that we would. There's something we did in October that we haven't gotten back (February). It's only on our report card that we know how we are doing. She doesn't tell you individually.*

By way of suggested feedback preferences a parent mentioned, "*Mad Minutes* [worksheets] provide repetition" and an elementary teacher held that there should be a focus on "what the students did right."

Student feedback can have a very positive impact, as one elementary assistant principal put it: "Assessment motivates." In addition to motivation from "parents and peers" elementary and secondary students were keen to have "external motivation [like] stickers, pencils." Indeed, one secondary student declared, "We've turned into assessment pigs. I love credits and grades. I'll do anything for a bonus project!"

Curricular alignment. It is of interest to note that many interview and focus group participants recognized the value and importance of aligning the curriculum with actual assessment. Teachers and administrators at all levels referred to the need to "align assessment with curriculum and instruction" and for the "alignment of curriculum, teaching, and assessment." Indeed, others asserted, "Assessment must match curriculum," and expressed a need to "link assessment to the Program of Studies." Despite this, survey data response to the item, *There is a match across what is taught, what students need to learn, and how students are assessed,* indicates mostly moderate perceptions that this is in fact the case. Results show only 73.8% educators, 57.3% students, and 57.2% parents agreed or strongly agreed to the statement (see Table 23). The following quotation from an elementary principal aptly illustrates the challenges this creates for teachers:

> *For example, last year I gave a letter grade and a small comment. All of a sudden we have the strands of language arts broken into learning outcomes. I posted outcomes in my room. Now all of a sudden I have to assess outcomes because I have to have something in there. Coming out of the report card, I had to put in "not applicable" (N/A) because I didn't have anything to put in there. We had to change our grade book so it reflects the learning outcomes. Now my assessment addresses the oral speaking side of things, the writing that went into preparing the PowerPoints, the design, so instead of one mark for a PowerPoint presentation, now I have in my grade book descriptors of a variety of outcomes.*

Table 23
Teacher/Classroom-based Assessment

Item	**Educator**			**Student** [4]			**Parent**		
	% SA/A	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**
Teacher/Classroom-based Assessment Questions									
There is a match across what is taught, what students need to learn, and how students are assessed.	73.8%	21.5%	4.6%	57.3%	15.0%	27.6%	57.2%	18.8%	24.0%
Regular attendance improves student achievement.				73.9%	16.1%	10.1%	95.6%	3.4%	1.0%
Teachers collaborate to review student assessment data.	90.3%	9.2%	0.5%						

Note: Data for the items were clustered according to positive, negative, and don't know.
Percents were calculated using the total number of responses for each item.
SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

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[4] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

In addition to curriculum alignment, participants felt there was a need for assessment clarity and coherence.

Consistency and coherence. For teacher and classroom-based assessment, the need for consistency and coherence was seen to be particularly important. An elementary teacher talked about the importance of linking student input and curriculum assessment:

> *In my practice, the inclusion of student input from the development to the implementation and the end product—in the rubric—most of their assessments are generated where I do a part and they do a part. Then we get together and discuss it and come up with an end result—what are the benefits. They really understand what is expected. I understand the curriculum really well and the students understand it and they do it really well. They are able to describe what they did well and the expectations—the students are able to see why they got the mark they got and feel it is fair—students are more aware of the curriculum and I am as well. There have been times when I have looked at the curriculum and thought, "Oh I don't have to do that or, oh dear, I do have to do that," so I am looking at the curriculum document and it is a more day-to-day consciousness and that transfers onto the students and the parents.*

Although comments in this regard were mainly from educators, a secondary student did express that he wanted "assessment consistency in the same department." In light of the fact that most secondary schools have multiple teachers for different subject areas, one teacher spoke of the importance to "seek consistency in common course finals, outlines, formative assessment, and weightings." The need for consistency is further highlighted in the following excerpt:

> *In my role and the district role we are trying hard to eliminate the educational lottery in assessment by streaming our processes, such as common finals, common formative assessments, common course outlines, and weightings of each of the components determined on outcomes rather than behaviors. We are reflecting more what students know as opposed to what their behaviors are. Students feel it is fair for them.*

This degree of effort and commitment may in fact be necessary, as another secondary teacher put it "good assessment is onerous." Perceptions were that this kind of coherence was achieved through "dialogue among colleagues" and a secondary principal felt the process contributed strongly to "teacher understanding." There is evidence from the quantitative data to support these perceptions. In response to the survey item, *Teachers collaborate to review student assessment*, an impressive 90.3% of educators indicated they agreed or strongly agreed as shown in Table 23.

Ongoing improvement. Beyond the plethora of specific strategies described previously to advance teacher and classroom-based assessment, a number of generic strategies to promote ongoing improvement was evident in the research data. Relating to the practice of purposeful planning, one senior high school teacher shared her strategy of backward mapping and planning as being core to her assessment approach. Ongoing improvement is also evident in the school-based assessment approaches that are being developed, as described by a charter high school principal:

> *Depends on the assessment. Internally developed, we are getting better on that. Students' understanding and self-assessment through rubrics, for example, we are ahead of where we have been. Both students and teachers are still struggling with this. What is a 3 versus a 4? Need to work on a common understanding of what those assessments really mean. However the more we move to rubric assessments, even though they are appropriate, they aren't as well understood as percentages and grades. Another example is critical thinking. We've done a lot of work in this area, and a problem is getting students to value it. "I don't want to learn to think. I just want the mark," so it's again a need for cultural change.*

Comments from a focus group of junior high teachers provide suggestions for ways that Alberta Education might provide greater support for classroom assessment:

> *Resources, more computer-adapted assessment. Go in and build the test, so if we have computer resources it would save time. ... Nice if Alberta Education and publishers could get together adapt and modify a variety of computer assessment resources, rather that a teacher creating by himself. Gather a group of teachers from science, and give teachers a resource. For students this would give continuity within and between teachers and schools in the district. It should be flexible to modify but at least basic grounds. Right now we are building rubrics, etc., all time and it would be nice to have something to start with. ... Nice to have a standardized test bank, assessment bank, ideas for variety of resources from publishers. Alberta Education has a role here working with publishers. They have access to resources; can second teachers. [There] should be a group we can draw from, a talent pool, create a bank of different ways to evaluate, tests, labs, presentations. There is comfort in standard approaches. I like the website Learn Alberta....Needs to be Alberta Education approved. More has been downloaded to teachers. It is constant.*

Other senior high teachers stressed that "assessment is continuous" and there should be more focus on "formative assessment." One parent also felt that "children need support and structure for assessment to mean anything." Taken together such strategies might be referred to as "educative assessment practices" as a senior high principal described it and an assistant principal suggested that the schools "use data to improve future courses."

With reference to curriculum, a parent was concerned that "more curriculum is pushed into lower grades" and, in agreement, a senior high student commented that planners are "trying to cram more into curriculum earlier." An excerpt from a focus group with senior high teachers adds some insight to the challenges of too much curriculum:

> *The sheer amount of curriculum... the amount of change, [like] Social 30-2. I don't know if our kids will pass. They bring people in to create curriculum and [they] may be really good, [with] expertise in curriculum but not necessarily good*

> *teachers. Huge curriculum sets kids up for failure. It happened with Math 30 Pure and will happen with Social 30 as well. ... We're not so time-focused and result-oriented. Rather than a detention, we work with student to get the work done, work through problems. We send positive and correct messages.*

Closely related to this is the issue of homework. One senior high school student complained of having "too much homework" and an elementary student divulged, "Incomplete homework must be completed during breaks at school." One of the ways that schools have responded to homework issues and thereby likely contributed to ongoing improvement is to implement homework clubs right in the school. Students at elementary and secondary levels reported having access to this kind of support. Another factor associated with improving student achievement is attendance. Survey results for the item *Regular attendance improves student achievement* had 73.9% students and a resounding 95.6% of parents indicating that they agreed or strongly agreed (see Table 23).

In summary, there appears to be widespread acknowledgement of a transformation in teacher and classroom-based assessment, and despite ample evidence of change being implemented in Alberta schools, some criticism and perhaps confusion about contemporary classroom assessment remains. Several examples of contested assessment practice were noted. Confusion as to the focus on learning versus behavior and inappropriate test preparation, as well as some classroom assessment practices being perceived as reward and punishment were most often cited. Several specific strategies were tied to good classroom assessment practice including the use of multiple measures and methods, attention to student feedback and motivation, curricular alignment, and striving for consistency and coherence. In addition some generic approaches for ongoing improvement in teacher and classroom-based assessment practice were noted. Quantitative data affirm a general trust of teacher-based assessment and the use of multiple measures in classroom assessment, although some discrepancies in participant perceptions were evident for the latter. Only moderate agreement was indicated for the perceived match between what is taught, what students need to learn, and how students are assessed.

Provincial Assessment

There are two forms of provincial standardized assessments in Alberta, the Provincial Achievement Tests and the Diploma Examinations. The Provincial Achievement Tests' purpose is to help educators maintain standards, to monitor student achievement over time, and to assist in improving the quality of education for elementary and junior high school students. These tests are not for certification purposes, however, and all Alberta students, with few exceptions such as students with identified severe special needs, are required to take these tests (Alberta Education, 2008a). Unlike the Provincial Achievement Tests, the main purpose of the Provincial Diploma Examinations Program is to certify the academic achievement of graduating students by awarding an Alberta High School Diploma, a Certificate of Achievement, or a High School Equivalency Diploma (Alberta Education, 2008b). Nevertheless, the examinations also assist educators to maintain standards, to monitor student achievement over time, and to assist in improving the quality of education for high school students.

This section of The Alberta Student Assessment Study addresses the following areas: focusing curriculum and instruction, policy and procedural responses, accountability and standards, response to ranking, affective/emotive responses, and rumours and misunderstandings. This specific segment addresses focusing curriculum and instruction.

Focusing curriculum and instruction. Educators, parents, and students all felt the provincial assessment program's influence through clarification of the curriculum, the impact on instruction, and the impact on classroom assessment.

The qualitative data gathered from elementary educators reinforced the notion that the provincial assessments assist them in focusing on and clarifying the curriculum, as well as illustrating what they had to teach. For example, a senior high school educator said that at one time he included behavior and attendance components in student assignments, but now, because of the focus on the curriculum due to provincial assessment, he aligned curricular outcomes with student assignments. Further, as one elementary educator commented, "PATS (Provincial Achievement Tests) make administrators and teachers responsible for teaching the curriculum." Another elementary educator observed that because of provincial standardized testing, the Grade 3 and Grade 6 curricula are covered better than in other grades because of the testing, and teachers of Grade 6 have to cover it all. The only area where notable reservations about achievement testing were expressed is the Grade 3 testing and even those data were far outweighed by support. No clear preferred and/or viable alternatives to provincial standardized achievement testing emerged in the study.

The data from secondary educators indicated that the diploma examinations focused them on the curriculum and helped to ensure student success. Secondary assessment educators also felt that the diploma examinations helped to structure those teachers who needed structuring in their curricular focus. The only question that arose relates to the actual weighting. No preferred weighting emerged to guide a change from the current 50% weighting of diploma examinations. The data suggest that diploma examinations provide a number of benefits to students and the education system generally.

A middle-school principal described the provincial assessment as a certification process and posited that the provincial achievement tests clearly reflect the *Program of Studies*. In addition, he stated that the tests assist educators and administrators who "need to have regular information about how the *Program of Studies* is being taught and how well the objectives are being reached."

Parents also realized the value of the provincial assessment program in ensuring that the curriculum was taught. One parent described it this way: "If the teacher doesn't go through the curriculum, the kids are hooped." One elementary vice/assistant principal acknowledged that the information to promote instruction and learning from the provincial standardized tests was important, and in that respect, more valuable for educators than the general public. A middle-school principal agreed that it was important for educators also because provincial assessment was used for curriculum monitoring. An elementary vice/assistant principal agreed "the PATs provide good benchmarks for all teachers in Alberta."

The qualitative data were mixed about the provincial assessment's impact on educators' instruction; some educators reported that the impact on instruction was both positive and negative. The elementary educators who reported that provincial assessment had a positive impact on instruction based their views on the quality of the provincial achievement test questions and data analysis. The test questions were seen as "excellent" and "educative," and subsequently influenced educators' instruction. As an example, elementary educators noted the test questions' variety and complexity, requiring students to use higher level thinking skills such as in solving problems that were new to the students, and applying information in a new situation. Another elementary educator noted that the tests influence educators to follow the curriculum and engage in good instruction: "What it boils down to is that the PATs make administrators and teachers responsible for teaching the curriculum." The educator continued and reaffirmed the test question quality by describing the way the concepts are put in unfamiliar situations for students to then transfer their knowledge to solve problems. Other educators used the results to improve teaching and learning, for example, an assistant/vice principal said that at her school "the teachers analyze the PATs and talk about it as a division rather than 'it's you and your kids.'"

Elementary educators reported that the provincial achievement tests lead to teaching toward the test. Since the test is based on the curriculum this was seen as a positive practice. Two junior high educators reported that Alberta Education's provincial assessment program was important because it set standards, promoted good practice, and provided curricular outcomes that gave continuity to teaching and program consistency, and that "the provincial achievement tests provide good benchmarks for all teachers in Alberta to know where they are at…." A high school educator said, "

> *I hated diplomas until I heard the guy who is the person who okays the diploma exams. I [now know] the amount of effort and thought and research that goes into them…. If we all created our exams to this level we would be doing a great job.*

Secondary vice/assistant principals noted the usefulness of the diploma examination results because they led to a review by the teachers in the department. Senior high educators also reported that this was positive because it led to reflection, particularly where there were differences between the teacher marks and the diploma marks. Another high school educator said that the diploma examination improved his instruction after viewing the diploma examination results:

> *Five years ago I had an English 30-2 class where marks were 10% lower than the provincial average. In [another province] there were no departmental exams. No formalized feedback to compare how students were doing to others. At that time I thought I was leaving the land of authentic assessment to the land of standardized*

> *testing. [I thought that] the class mark was not reflective of true ability as measured by diplomas. I looked in the mirror and said, "What's going on here?" Now the class mark and diploma exam marks are close and I know what's gone on to make that change. I know what I need to continue to do and continue to work on.*

Because of the Diploma Examination results' review, educators scrutinized their teaching in Grade 12 classes in light of the Diploma Examination feedback and results. A senior high school educator reported:

> *I teach the curriculum because that's my professional obligation. That's my job, to interpret the curriculum, and deliver in my own style and my own way. That is what makes it fair. I'm not randomly choosing topics. I'm held accountable by the curriculum. In some cases the curriculum needs to change.*

Secondary educators stressed the importance of the positive effects that diploma examinations have on instruction but cautioned that having these diploma results and not doing anything to improve is not helpful for anyone. They felt that it was important to be knowledgeable about interpretation of diploma data to inform practice, provide information about teachers' strengths and areas that need improving, the program, and the school. Nevertheless, teachers needed the time and training to interpret and understand Diploma Examination results accurately:

> *Senior high educators reported that the diploma examination's results were useful for, interpreting data, using data to inform practice. We get that information in part from diplomas. It provides information about us as teachers, the program and the school. We look at it as one piece of data, one piece of what we use. And an important one. Teachers need the time and training to go through and understand diploma exam results. I'm not sure if the 50% from the diploma exams would need to be as high if all schools were reporting accurately and using similar standards.*

Secondary students' reports were positive also about the diploma marking process and the information from the diploma examination results that provided feedback about how well students were achieving. Furthermore, secondary students felt that the diploma examinations were very fair "because everyone is writing the same test…. None of your teachers are marking your tests so there is no bias and they are not looking for the names, just the information."

The qualitative data also indicated that elementary educators had varying negative views about the provincial assessment's impact on instruction. Elementary educators preferred the provincial achievement test be more of a diagnostic tool to assist teachers with classroom instruction and student learning. Additionally, the information from the provincial standardized test results was reported to be in the educators' hands too late to be useful for making adjustments to instruction and program, or provide feedback about the students who were by then in the next grade.

The elementary educators perceived the provincial assessment was judgmental of teachers in that the results reflected the quality of teaching of those teaching "in the PAT years." However, an elementary principal said that because the PATs drive the teaching, the PATs were the responsibility of all the school, not just Grade 3 and Grade 6 teachers.

The quantitative data provided positive support about the provincial assessment program's impact on instruction. Slightly more than half of the educators and approximately 66% of the parents reported that provincial standardized tests are useful for improving instruction (see Table 24).

Table 24
Provincial Standardized Tests are Useful for Improving Instruction

Item	**Educator**			**Student**[5]			**Parent**		
	% SA/A	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**
Provincial standardized tests are useful for improving instruction.	53.6%	44.3%	2.1%				65.9%	22.8%	11.3%

Note: Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

There was little mention of the impact that provincial assessment program had on classroom assessment, but senior high educators appreciated the part that the diploma examinations played in affirming credibility to their classroom grades and how the diplomas gave their class exams credibility. For example, a senior high principal said:

> *At the same time [as I was an administrator] I taught in between diploma exams, and in my First Nations school the tests gave me credibility, and people couldn't say that we gave high marks for kids just showing up. Despite problems with the tool, it gave us the same credibility and we didn't have to defend ourselves any more.*

Senior high students supported this view because they believed that the diploma examinations encouraged educators to mark more accurately. One senior high student stated:

> *I find it is better in Grade 12 because they mark tests like a Diploma, but grades 10 and 11 teachers are able to mark how they want—and so it is less accurate.*

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[5] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Moreover, senior high educators reported that the diploma examinations dictated educators' assessment, how they taught the students, and how they paralleled their classroom assessments to those of the diploma examinations. For example, a senior high administrator said he saw his role as preparing students for writing exams because he felt it was the same skill they needed to know if they go to postsecondary. He continued, "I hope they've done the work in the curriculum and are prepared to write well, and that goes far better than teaching to the test."

Policy and procedural responses. This section consists of two segments: student issues and teacher issues. The qualitative data indicated that students and teachers had mixed perceptions about the provincial standardized testing, and provided some suggestions about improving the tests, for example, providing more time or allowing more flexibility of time, and reducing the weighting of the Diploma Examination. Some teachers had concerns about the cultural relevance of the provincial standardized tests in certain low socio-economic status schools. Although the teachers and students reported mixed perceptions about the format and administration of the provincial standardized tests, and concern that the marks were scaled, and so on, the quantitative data show that as far as trusting the *results* of the provincial standardized tests, over half of the parents and students trust the results while only a third of the teachers trust the results.

The qualitative data showed that some senior high students agreed that it was good for the government to monitor how well students are performing and students liked the consistency of approach. Nevertheless, elementary-to-senior high school students also had some suggestions that indicated their testing preferences. For example, some students from an alternative senior high school preferred end-of unit-tests over the Diploma Examinations. Two students said that they would prefer to be tested on the unit itself "…like straight after the unit completion." One student continued to say:

> *I would like to have a couple of tests on that unit. It is so hard to retain all of that for so long. It is not impossible but it is not a good projection of what you have really learned [and] you are forced in a situation to remember a lot of things, then you forget a lot of things. It's too fast.*

Some other senior high students from the regular school stream preferred the Diploma Examination to teacher-made tests. Some senior high students did not like the 50% weighting that the diploma examination had, and reported that it was not appropriate. For example, one senior high student said, "[The diploma examination weighting is] too much at 50%, too much pressure. All you do is study and cram. When I study I get in there and lose it all. I second guess myself." Another senior high student agreed:

> *[Alberta Education needs to] adjust the Diploma to be lower than 50%. You work hard through the year so it'd be good to have 20% to 30% for the Diploma. I think that tests are hard but they reflect what you've learned. They are a reflection of what you do understand but that reflection shouldn't be 50%.*

Similar to some senior high students from the alternative school, one elementary/middle school student preferred shorter tests than to "lose all marks on one big one." When writing the Diploma Examination, some students reported that they had problems with the test-taking location; for example, the students said that the gym was distracting. In support of student concerns about distractions and disruptions while they write provincial standardized tests, one parent said he phoned about a major disruption to the school with noisy workmen and the directive was that the children had to write the test on that day regardless of the construction noise.

Several elementary students said that they liked multiple-choice questions for a variety of reasons. On reason was that "you know the correct answer is there." Another reason was due to a physical comfort factor: "I like it [multiple-choice] better than short answer. I have to write too much [in the written test] and my wrist gets sore." A senior high student, however, said she did not like the multiple-choice questions on the test and said that she tends to "second guess myself on multiple choice."

Elementary/middle school students reported a variety of test preparation tactics that their teachers shared with them for the Provincial Achievement Test. One elementary student said, "We did brain exercises and physical exercises before the tests." Another student said that their teacher "provides meditation time when PATs are on," while another student said, "My teacher … gives us hints about what to expect with the achievement tests. He gives test-taking strategies." Other students said that teachers give them old tests for practice. Another student said, "We prepare for PATs all year."

In support of the Diploma Examinations, one senior high teacher said, "Diplomas are carefully developed and if we developed our exams to this level we'd be doing a great job"; however, other teachers reported concerns about the Diploma Examinations.

One of the issues was the weighting that the Diploma Examination has. Although some educators said it was a fair weighting because sometimes classroom marks are "padded" so the 50% allows some external check, but some other educators said the 50% weighting was too much. One senior high educator said, "With 50% of the course grade based on this test is ridiculous, because so many different circumstances happen with this one test." Another senior high educator suggested the Diploma weighting be 20% or 15%.

A senior high assistant/vice principal was concerned with the rigid time allocation on the Diploma Examinations. He said, "If students need more time on the Diploma Exams then give it to them." Another senior high assistant/vice principal said that timed tests are not good assessment. A senior high teacher agreed that the issue of time was of concern and said that time flexibility was needed for the assignment (Diploma Examination). Time was a concern for elementary educators as well because one elementary educator said, "It's a test taking situation, it's timed, it's special; it's not a natural writing experience at the Grade 3 level."

An elementary educator said that the provincial standardized tests are meant to be viewed just as a snapshot, but another elementary educator reported that she didn't like multiple-choice exams. In support, another elementary educator said, "The multiple-choice test asks a lot for kids in Grade 3—it's a long time to concentrate."

Senior high educators noted the issue with cultural relevance in low socio-economic schools because of high numbers of diverse students. An elementary educator agreed, "Culturally, there is definitely issues, just going to achievement tests, there are issues with our student population with cultural relevance of assessment."

One senior high educator was concerned that one year the diploma marks were scaled. To assist students in some ways with reading and answering the questions on the Diploma Exams, another senior high educator suggested that high school students should have access to a class on how to write tests.

Although the qualitative data showed that educators and students expressed some concerns over the provincial assessments, the quantitative data indicated that 55.8%f of the students and 56.3% of the parents trusted the results, but about the same percentage (53.9%) of the teachers in the study reported that they *did not trust* the results of the provincial standardized tests. Given that the trust of students and parents in teacher-made tests was high, one interpretation of Table 25 is that students and parents understood the lower weighting of provincial standardized tests relative to teacher-made assessment in overall decision making about educational programming and student placements.

Table 25
Provincial Standardized Tests' Results are Trustworthy

Item	**Educator**			**Student**[6]			**Parent**		
	% SA/A	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**
I trust the results of provincial standardized tests.	33.2%	53.9%	13.0%	55.8%	32.3%	12.0%	56.3%	34.2%	9.5%

Note: Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

Accountability and standards. This segment addressing accountability and standards covers two topics: accountability and objectivity, and parent perceptions. According to the qualitative data, many educators from elementary, middle school, and senior high school made positive statements about the role the provincial standardized testing program plays in accountability and establishing standards in the education system. Educators felt that provincial assessment was a good accountability measure and benchmark provider for Alberta educators. According to the educators, the provincial standardized tests provided consistency in the Diploma marking and made valid inferences from the student test results. Students, too, liked the consistency of the Diploma Examination program, particularly because "there was no bias in the marking since it wasn't your teacher marking the exams." Parents' perceptions were also positive about the role the provincial standardized testing has in accountability. However, in contradiction, the quantitative data showed that about 60% of the educators reported that provincial standardized testing negatively affected parent confidence in the education system, while only 38% of the parents thought that it negatively affected parent confidence in the system.

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[6] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Some educators would like to see a different balance in the testing program because of the perceived "high stakes" Diploma Examination that students take in the senior high school. Educators also would like richer assessment tools, such as performance-based assessments used in provincial standardized testing.

Elementary/middle school educators reported that, as far as accountability and objectivity were concerned, the provincial standardized tests were useful. One elementary educator said, "It's a valid piece of data," and another elementary educator said, "The PATs are an accountability measure for teachers." Administrators supported this view and an elementary assistant principal said that the provincial standardized tests were good benchmarks for all teachers in Alberta. A secondary assistant/vice principal agreed saying, "I certainly think the Diplomas are a good accountability piece and they can measure how we're doing provincially." An elementary principal supported the provincial standardized testing program for its accountability role as well. She said,

> *I am still a fan of standardized testing. There's not one of us who doesn't want to be accountable, or see those kinds of assessments as tools in the accountability process, [but] it's too high stakes, and it needs to be balanced better. Those kinds of assessment tools in the assessment process are not rich enough.*

Parents said that there should be "some sort of standardized test" in the education system and that the Diploma Examinations serve adequately as a standardized measure for admission to postsecondary education institutions. Additionally, the provincial standardized testing was useful for school boards because the school boards need the provincial standardized assessments to check for trend data in their school districts. The parents thought that the provincial standardized tests were valuable because "the PATs take out some of the subjectivity out of assessment." Another parent agreed that provincial standardized testing takes out the subjectivity because when classroom teachers mark student work, the grade is influenced by the child's personality. The parent asked, "Who doesn't have personality affecting marks? That's how it has always been. They [teachers] base it on, 'she's a good kid.' The PATs take out the personality." Finally, if the provincial standardized testing seemed overdone to some, one group of parents suggested that a random sample of students be tested.

According to the quantitative data, almost half of the parents who participated in the study reported that provincial standardized testing positively affected parent confidence in the education system, while only 30.3% of the educators reported that it did. Almost 38% of the parents said that provincial standardized testing negatively affected parent confidence in the education system while 59.9% of the educators reported that it did. On the other hand, almost a third of the students did not know whether or not the provincial standardized testing either negatively or positively affected parent confidence in the education system.

Table 26
Provincial Testing's Effect on Parents' Confidence in the Education System

Item	**Educator**			**Student**[7]			**Parent**		
	% SA/A	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**
Provincial standardized testing negatively affects parent confidence in the education system.	59.9%	26.0%	14.1%	34.5%	33.0%	32.6%	37.8%	45.5%	16.8%
Provincial testing positively affects parent confidence in the education system.	30.3%	54.9%	14.9%	42.6%	25.7%	31.7%	49.9%	33.6%	16.5%

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know*

Responses to ranking. The qualitative and quantitative data in this section are grouped according to "positive" results, "negative" results, and "student voice." In response to selecting schools based on provincial standardized results, the quantitative data indicated that there was fairly close agreement between students and parents agreeing with the statement, *Provincial standardized tests are useful for selecting schools*, but only about half as many educators as parents and students agreed with that statement. Educators also differed strongly with parents with the statement, *Provincial standardized tests are useful for ranking schools*. Almost twice as many parents as teachers reported that the provincial tests were useful for ranking schools. Students were asked if provincial standardized tests were useful for comparing schools and over half agreed that they were useful.

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[7] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

The qualitative data showed that some teachers felt that ranking had a positive effect. One elementary educator thought it positive to compare her school with other schools and cities to see how it rated, and an elementary principal said that the results were useful when judging schools. Another elementary school educator thought it positive to use the provincial achievement test results to compare student success and schools. Administrators in schools also felt positive about ranking, because of the positive effect it had when the school ranked highly. An elementary assistant/vice principal stated, "As long as achievement tests [results] are good then parents are happy." When considering the parents' attitudes towards ranking, one senior high educator said, "Parents love the rankings, statistics, and use it as an indicator." In providing a rationale for ranking, one secondary principal said, "Rankings are a result of no previous accountability."

One parent showed interest in comparing her child's school results with those of other schools. Another parent agreed and said:

> *It would be nice to see the comparison. Are rural schools doing as well as city schools? Are teachers teaching as well as teachers in other schools? I know they say that it is nerve wracking for kids but they should keep them [provincial tests] because all of your life you will need to do things you aren't excited about. It's a life skill.*

Almost twice as many parents (75.7%) as teachers (39.4%) said that provincial standardized tests are useful for ranking schools. This result was similar to the results for the statement, *Provincial standardized tests are useful for selecting schools*. Again about twice as many parents (55.4%) than teachers (26.4%) agreed that the provincial standardized tests were useful for *selecting* schools. Students were in close agreement with the parents and 47.1% said that the provincial standardized tests were useful for school selection. Not surprisingly, they reported a similar opinion about using the test results for school comparison; more than half the students (55%) said that the provincial standardized tests were useful for *comparing* schools.

Table 27
Provincial Standardized Tests are Useful for Ranking, Comparing, and Selecting Schools

Item	Educator			Student[8]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Provincial standardized tests are useful for ranking schools.	39.4%	59.6%	1.0%				75.7%	18.4%	5.9%
Provincial standardized tests are useful for selecting schools.	26.4%	65.3%	8.3%	47.1%	29.7%	23.2%	55.4%	29.4%	15.2%
Provincial standardized tests are useful for: comparing schools.				55.0%	25.9%	19.1%			

Note: Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

According to the qualitative data not all educators, students, and parents were in agreement that ranking had a positive effect on schools. The educators said that there was confusion about the ranking—a secondary vice principal said that parents need to have rankings explained—and that the provincial standardized tests were not meant for the purpose of ranking. One assistant from a middle school explained the ranking issue this way:

> *I don't like the fact they [provincial test results] are used to rank schools. They [provincial tests] have a definite purpose; they are more valuable to educators than to the general public. I don't think the general public has the same understanding for why they are done or the factors that might allow a school to be at the high versus the bottom end of the ranking. They are scores that don't necessarily need to be shared for ranking purposes.*

A senior high principal agreed:

> *My concern with the rankings is that I have a broad background of knowledge to draw from that parents don't have. When you just put out that document it's a piece of information and yet it is presented as if it's all there. The other problem is how it is presented. When I first came here we were very poor. I spoke to the [school]*

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[8] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

> *board and told them about what I was doing and what I was going to change for a few years. Then it clicked. If you look at participation rates it is a whole different thing, our rates are very high. If you look at how many percentages of students who are graduating from Pure Math 30, our stats look exceptional. It is a response to no accountability.*

An elementary/middle school assistant/vice principal reported that she did not like the publication of the provincial standardized test results: "Publishing it in the paper is quite annoying. We're more interested in how the kids are learning, how the school is going." A senior high educator who thought that the Fraser Institute reporting was partially helpful, said, "The Fraser Institute can be helpful. However, the way results are reported, I especially find it difficult for the elementary schools. It just is not helpful." A middle-school principal agreed by saying that rankings may not be useful; nonetheless, he continued to say: "Human nature is a combination of fear and motivation so maybe it serves some purpose."

One of the issues that came through clearly was the perception that ranking on the whole was unfair, particularly, as one elementary/middle-school principal stated, for schools with a low or high socio-economic status. "It's an injustice to schools. We know certain schools are going to be lower for various reasons—economics play a factor." Another middle-school educator cautioned that there are various reasons the provincial results might be low at a school. It is not only the socio-economic factor. It could be "the teaching and maybe leadership. [Provincial standardized test results] can be used in a dangerous way. [It's] detrimental to a community and then the enrollment will drop." An elementary assistant/vice principal from a different school agreed and said she didn't like ranking, as did a senior high educator for similar reasons. An elementary principal agreed and said, "There needs to be a better way than comparing schools in terms of SES [socio-economic status]. It's demoralizing for lower SES schools." An observation that one elementary teacher made and reported was that "the PATs have changed from monitoring learning, to ranking of schools." She continued to elaborate that the information should be used instead to improve teaching and learning.

Parents said that ranking was not a positive thing because private schools can discourage weaker students from registering in them so that the school can maintain a higher ranking in the public reports. Not surprisingly, parents in lower socio-economic status schools said they didn't like the Fraser Report because the lower SES schools ranked low and the parents felt that that did not necessarily reflect the quality of the school, and that it was unfair. One parent said, "If you are able to explain the items and they [students] understand, they can knock it [the provincial standardized test] out of the ball park….

One group of parents in agreement about the negative effects of ranking schools said:

> *It's not fair for [using] provincial testing to grade a school, to say that's a good school or a bad school. It depends upon language and cultural barriers. ... I don't like how they rank them in the newspaper. It's like a reflection of that whole community. ... It's not positive. It affects all the kids who go to that school. That can*

> *be damaging to the kids who go to that school. ... Schools get a bad reputation. ...It bothered my daughter because she saw the ranking in the news and she said, "I'm not going to a bad school." Kids take that to heart and they wrote the tests that year. ... I've heard people say, "Your kids go to [School X] and that's where behavior problem kids go." ... It's important to have assessment info for parents as long as they understand where it is coming from, such as the whole ranking. It's kind of a gossipy thing.*

Although there were many negative comments about ranking and making the school provincial standardized test results public, the quantitative data showed that almost half of the educators and almost three-quarters of the parents agreed that Alberta Education test reports for each school should be publicly available. That is, they felt that the importance of keeping education data public and transparent outweighs the danger of misreporting by independent agencies.

Table 28
Test Reports for Each School Should be Available

Item	**Educator**			**Student[9]**			**Parent**		
	% SA/A	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**
Alberta Education test reports for each school should be publicly available.	47.9%	45.4%	6.7%				74.3%	18.6%	7.1%

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know*

According to the qualitative data, students said that they didn't care about rankings; instead, they "focus on themselves."

Teachers' survey responses (Table 29) indicated low support (34.9%) for the use of provincial standardized tests for ranking students, although several educators noted the school-based practice of using Grade 9 Provincial Achievement Test results, for example, to assign individual students to specific classes in Grade 10.

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[9] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Table 29
Provincial Standardized Tests are Useful for Ranking Students

Item	Educator			Student[10]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Provincial standardized tests are useful for ranking students.	34.9%	64.1%	1.0%						

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item.*
SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

Affective/emotive responses. Emotive responses, at various levels of intensity, emerged regularly throughout the interviews with parents, students and educators. The qualitative data indicated that the emotive responses from administrators, educators, students, and parents occurred in a continuum of intensity and time. Elementary educators involved with the Provincial Achievement Tests felt pressure from administrators, and noted the trickle-down effect on students, teachers, and parents. A secondary principal reported that some students had few concerns while there were other students with many concerns with the Diploma Examinations. She said that there was "a continuum of students [from those] who are OK with exams to those who freak out."

The emotional continuum regarding provincial standardized assessment appeared to begin as early as elementary school. An elementary student felt the pressure throughout the year: "I think everyone is worried because the whole year you are preparing for the test and it makes it seem like a big thing." A senior high teacher concurred and said "they *always* focused on Dips [Diploma Examinations]."

At the middle-school level, one teacher reported:

> *Oh, they are stressed, especially in Grade 9 because we talk about their [course] selection in high school and what pathway they can take, and some don't stress, but others, especially the high achievers, do get stressed about their high school options.*

The senior high student experience was no exception as far as the test pressure issue over a timeframe was concerned. According to a group of senior high students, they had been preparing for the Diploma Examination for the whole year, and noted that a Diploma Examination preparation course was helpful:

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[10] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

> *There are some teachers who prepare you for the whole year for the diploma exams and you should do well on it but in one course I had no idea what to expect on it—no practice problems or how it was broken down and the only way I would have known was by doing a [university] diploma preparation course, but if you had not done that course you would not have had any idea.*

Senior high students were not alone in experiencing test preparation; elementary students reported that they were given test preparation as well.

Several indicators of "stressors" and "pressures" were mentioned throughout the interviews. One elementary educator reported that teachers who taught the "PAT grades" (those involved in provincial testing) felt considerable pressure. Elementary students observed that the Provincial Achievement Tests pressured and stressed their teachers also. One elementary student said, "Next year's tests are going to be really hard because we could hear the teachers being hard on the kids. They were yelling at them while preparing for the test, 'Come on guys, get better grades.'" Another student agreed, saying, "[The teacher was] not really being mean but just trying to encourage them [the students]. "One teacher last year had a very loud voice so we heard everything she said."

Another group of elementary students described the test pressures and provided some advice:

> *This PAT test is really freaky and you get lot of practice to do and if you fail, it goes on your permanent record—it is like a play and you get lots of practice but it is like on the night you might get it wrong and you feel really bad.... Right before the test she [the teacher] puts a lot of pressure on you. You have to do the best work you have ever done. [I say] put less pressure on. A little pressure is OK but if it is 'the best work you have ever done' then it is bad ... because you get really worried and you might get some questions wrong because you are so worried.... Even though you are a straight-A student, your brain loses all the information and you have to think about it all over again.*

Other students from a different school concurred and said teachers try to help the students through the provincial standardized test experience through practice tests: "She gave us old tests to practice." Parents said, "The PATs put too much stress on the kids," and another group of parents said, "Teachers spend too much time prepping the kids." Another group of parents felt that teachers should not be "reviewing old PAT tests over and over." The qualitative data showed that middle-school students and parents agreed that teachers put too much stress on students to do well on Provincial Achievement Tests. One parent said she was very sorry that our taxes are used that way [on provincial standardized testing of students].

On the other hand, an elementary teacher reported that the provincial standardized tests stress the parents as well:

> *Parents are stressed about them. There are books going home to prepare their child for the PATs so that they can study for the exams. It is a major focus from March to June, a heavy emphasis on the PATs.*

An elementary assistant/vice principal agreed and said:

> *The attitude of teachers is a huge piece. If teachers are nervous about it, then students are. Just another way of assessing.... [In our school] it is a deliberate attempt to spread that responsibility, so it is not just the Grade 3, 6, and 9 teachers who have all the pressure with the PATs.*

In support of the statement that teacher attitude is a factor in student stress, a group of middle-school teachers said:

> *Teachers take it far too personally. [We] try to temper our teachers in terms of PATs outcomes. It helps to see where we are [and] where we are going. If students do poorly, [we] need to have that discussion about what went wrong.*

At the senior high level, a group of alternative high school students reported, that there was "far too much pressure on students. You see kids freaking out before exams, throwing up in toilets before exams. You are 18 years old and that is not good for your mental well being or for your health." Other students from another senior high school said that teachers bully and threaten students with diploma failure. However, a secondary school assistant principal countered and said that there was "a lot of self-induced anxiety at the Grade 12 level." A group of senior high students agreed that the stress comes from teachers, parents, and the students themselves.

Although many students, teachers, and parents had reservations about provincial standardized testing, not all comments were negative. Some parents thought that the "Grade 3 PATs were OK." Specifically, one parent said:

> *PATs [involve] teaching to the test. Depending upon who the teacher is, and not specifically here, is that really an accurate snapshot of how kids are doing if taught to the test? [It is] a lot of pressure the year they are in PATs.*

Elementary/middle school students said the PATs sound a lot harder than what they are and another student at the elementary/middle school grade level said, "PATs make me feel professional." Another student said, "Teachers make us feel good about PATs." Secondary students said that their parents "think PATs are educational and good."

Some elementary teachers said that it was "Good to have achievement tests." An elementary assistant/vice principal reported that the school staff understood the purpose of the provincial standardized testing program: "We talk about PATs in the fall with the executive team but there's not a lot of pressure there. I try to lower the stress level for the kids. We know it's about covering the curriculum." As far as pressure went, a secondary assistant/vice principal noted that teachers "Haven't seen much controversy over Diplomas. We celebrate them because we're doing fine."

Some parents understood the stress that accompanies tests, but also say that testing can be a positive experience, thanks to the teachers' assistance:

> *I think PATs make my son very nervous. In Grade 3 the stress came from the teacher who really put pressure on them. In Grade 6 the last two weeks of June they did review and it just seemed that they were covering a lot—the whole year—that made him think that it would be a long drawn-out testing process. Yet when it happened he handled it very well. He had a lot of techniques that he learned from the teachers.*

The survey results summarized in Table 30 show that 87.6% of the educators noted negative effects on student emotions because of provincial standardized testing, while almost two-thirds of student respondents and just under half of the parents agreed that provincial standardized testing negatively affects student emotions. Similarly, 80.9% of teachers surveyed said that provincial standardized testing negatively affects teacher emotions while only 38% of students felt that provincial standardized testing negatively affects teacher emotions, and even fewer parents (37.4%) thought the provincial standardized testing program negatively affects teacher emotions.

About 14% of the teachers reported that provincial standardized testing positively affected teacher emotions while just over 30% of students and parents thought that it positively affected teacher emotions. At the same time, about the 30% of parents and students reported that they did not know how teachers felt about provincial standardized testing (27.6% and 31.8% respectively).

Table 30
Provincial Standardized Testing's Effect on Student and Teacher Emotions

Item	Educator			Student[11]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Provincial standardized testing negatively affects student emotions.	87.6%	8.8%	3.6%	63.0%	21.2%	15.8%	46.0%	35.4%	18.6%
Provincial standardized testing negatively affects teacher emotions.	80.9%	14.4%	4.6%	38.0%	34.4%	27.6%	37.4%	30.8%	31.8%
Provincial testing positively affects teacher emotions.	14.4%	78.5%	7.2%	33.1%	36.0%	30.8%	30.3%	35.8%	33.9%
Provincial testing positively affects student emotions.	11.9%	82.0%	6.2%	33.8%	48.3%	17.9%	33.8%	44.8%	21.4%

Note: *Data for the items were clustered according to positive, negative, and don't know.*
Percents were calculated using the total number of responses for each item.
SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

Rumours and misunderstandings. Rumours and misunderstandings arose during the educator and parent interviews. The rumours and misunderstandings centered around two topics, questionable practices and confusion.

Some of the questionable practices such as misrepresenting student results occurred because educators did not want to feel embarrassed about students' poor provincial standardized test results. An elementary educator explained it this way: "Teachers cheat on the PATS because they take these assessments personally." Another elementary educator said, "Some schools, not ours, advise students to stay home on the day of PATs." A parent supported this statement when she said, "Weaker kids are told to stay home." Another parent concurred: "Some schools excuse a lot of kids. It does skew the results if they don't participate."

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[11] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Senior high school educators reported that questionable practices occurred at the senior high level as well. One senior high educator suggested that the diploma mark weighting be reduced to 30% in the blend for the student's final grade, but added, "but then some schools would pad their marks." An alternative high school educator said:

> *In a previous school I taught at we had a Physics 30 teacher who started with 27 students and [had] only 6 students [who] ended up writing the test because he made the first in-class tests so difficult that most students dropped the course, so his rankings on the Diploma were excellent.*

An elementary educator said that there were "rumours about teachers being transferred because of their students' poor performance on PATs or Dips." Other confusion arose about the purpose of provincial standardized testing and resulted in the polarization of classroom assessment versus provincial standardized assessment. Another elementary assistant principal reported the confusion of assessment purpose, e.g., assessment "for" and "of" learning. The assistant/vice principal said, "When I think about the assessing for learning…. aren't the PATs on another planet?"

An elementary educator described her confusion and frustration about formative assessment and provincial standardized assessment:

> *At some point we ran into this wall with formative assessment and then we run into Diploma tests and which is counter to that. In discussion with parents ... they say that [a descriptor] is fine in LA [language arts] but how is he going to go to get that scholarship where he needs a percentage, so we seem to be at odds when we have inquiry and formative assessment and then that is at odds with the curriculum branch who are pushing the standardized testing. Within our staff we don't have total understanding in terms of our understanding of formative assessment and where you get comments that "you need to get an 81 to move your mark up to a 4" so that is at odds. ... PATs, I remember when they first introduced it and they took samples to see how the curriculum was working and now it is widespread and it has become a burden on teachers and the amount of stress it puts on students. And the amount of time and money that is spent on it and for little value, and then when it is used by the Fraser Institute that makes it worse.*

A middle-school principal said:

> *The problem with it is it relates to the business of what do you assess? It's hard to have an assessment that does more than assess basic skills knowledge and facts. Some of the more important things like communicating, relating, and putting things together, if things like this are going well, then perhaps this reflect basic skill as well.*

Another elementary educator understood the confusion about provincial standardized testing and said, "I would like to say the PATs need to be relooked at but I am not sure how to do that. It is a bit of double-edged sword. [I'm] not sure what to suggest."

The qualitative data showed that teachers were concerned about being evaluated on their students' provincial standardized test results and thought that if these were poor then teachers would be transferred. The quantitative data (Table 31) showed that there was strong disagreement between the educators and the students and parents about the value of using provincial standardized testing for evaluating teachers. Only about 21% of the educators agreed that provincial standardized tests were useful for evaluating teachers, although about 59% of the parents and students agreed that provincial standardized tests were useful for evaluating teachers.

Table 31
Provincial Standardized Tests Utility for Evaluating Teachers

Item	**Educator**			**Student**[12]			**Parent**		
	% SA/A	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**
Provincial standardized tests are useful for evaluating teachers.	20.7%	78.2%	1.0%	58.2%	25.2%	16.6%	59.8%	30.5%	9.6%

Note: *Data for the items were clustered according to positive, negative, and don't know.*
Percents were calculated using the total number of responses for each item.
SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

Gatekeeping. There was no item on the survey about the issue of the Diploma Examinations serving as a "gatekeeper" for university entrance. However, because the topic arose from the parents, student, and educator interviews several times, it was included in this report in a separate section. Educators and parents saw the Diploma Examinations as useful devices for university gatekeeping purposes. Students, on the other hand, were concerned about gatekeeping because it negatively affected course selection, created pressure, led to test anxiety, and caused fear of failing the Diploma Examinations, and failing to qualify for university entrance.

Many educators and parents agreed that there was a need to have examinations for gatekeeping for purposes of university entrance and stated that the Diploma Examination weighting of 50% served that purpose well. Further, they said that the students' Diploma Examination experiences also prepared them for writing examinations once they gained entrance to university. For example, one principal said, "The Diploma Exam tests how they [students] are that day. I see my role as preparing them for writing exams. It's the same skill they need to know if they go to postsecondary."

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[12] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

A senior high school educator said that the data from the Diploma Examinations served several purposes: informing teaching, gatekeeping for post secondary, highlighting program effectiveness, and provided information about teachers. He continued, "Those marks are for university and you want them to do as well as possible and they want good marks." A parent agreed that the Diploma Examinations are "OK as a standardized measure for postsecondary admission."

A senior high educator said that if he were in a postsecondary institution, he would want the data because he perceived it as being more reliable than school-based data: "If high school reporting data is more accurate, then 50% could be reduced but not now. If you have a 30% spread then that needs to be explained. Right now we need the 50% on the Diploma Exam."

Some senior high students reported that the standards for university entrance are rising. They reported, "The expectations are so high for university that it is placing too much pressure on students in schools now, particularly in comparison with years ago." Another student questioned why he must do Pure Mathematics when he wants to study Humanities at university.

Students reported that they felt pressure from parents and fear about not doing well on the Diploma Examinations and ruining their chances for university entrance. The pressure felt at high schools was "mostly from the university [entrance requirements] and mostly from my parents. They ask if you are doing enough, or [tell you] you are not good enough. … and university entry rides on those marks."

One senior high educator questioned the fear factor as a single motivator in life. Also, a senior high school principal said that success or no success for students' university entrance hinges on their test anxiety and test performance:

> *Some secondary students love exams, may be lazy, and do best on tests. Others are terrified and always perform poorly. And there's everything in the middle. The dominant thing is fear for formal exams. Motivation comes from that fear. If fear is the single motivator for 13 years of your life, it's not going to help students. So tomorrow some students will write a 4-hour test and that decides whether they get into university or not. Twelve thousand hours of instruction is traded for four hours on an exam.*

According to one senior high student, some senior high teachers contribute to students' fear. The student reported:

> *I had a teacher who told me I was going to be homeless if I failed the Diploma. He highlighted [on] the class list all those who are going to fail the diploma. I told him I don't do well on tests because of test anxiety. The teacher said, 'You will not pass the test and then not get into university and will end up homeless.' Way to make the diploma less stressful.*

Grade Level of Achievement

Grade Level of Achievement (GLA) reporting involves teachers providing Alberta Education with their judgments of their students' achievement in meeting the Program of Studies outcomes in grades 1 through 9 language arts and mathematics. GLA data are intended to provide all levels of the education system with student performance information that will help decision-makers at the school, jurisdiction, and provincial levels evaluate the impact of education programs. This information is intended to be particularly useful in examining performance of groups of students in relation to a range of factors, such as gender, student mobility, English as a Second Language [ESL], and special learning needs. As additional data are collected each year, provincial trends can be monitored for different groups of students and this could result in local and/or provincial programs, initiatives and/or policies aimed at helping students to be more successful. Alberta Education will not use GLA data to evaluate jurisdiction, school, or teacher performance, except potentially in rare cases when a Ministerial review is undertaken under Section 43 of the *School Act* (Alberta Education, 2008).

Educators were concerned when GLA reporting was first introduced since many educators and parents did not understand its purpose or why it was included for accountability purposes. Some of those concerns were expressed during The Alberta Student Assessment Study interviews. According to an elementary vice principal talking about Grade Level of Achievement, "Initially GLA was met with trepidation." Some senior high educators reported that at the beginning, the GLA reporting was "difficult for teachers to get their heads around." An elementary assistant principal said that the teachers' association was not supportive of the GLA reporting and said, "[The provincial teachers' association staff member] has been very negative on the introduction of Grade Level of Achievement." Another elementary assistant/vice principal agreed and said, "[provincial teachers' association] newsletters have been very negative."

As educators became more familiar, with experience and through professional development (PD), with the purpose of GLA reporting, there was a subsequent shift in perception, curriculum focus, and assessment practice. A middle-school principal said that there was "a need to focus PD on GLA which also focuses on the curriculum." Some senior high educators said that GLA is focusing teachers on the curriculum. An elementary principal said that in her school the GLA has "shifted thinking about what is best in marking kids to be accountable to the public." An elementary vice principal reported that GLA was just more information to help. Several educators agreed that once understood, the GLA was no longer a concern. An elementary assistant principal summed it up by saying, "GLA is a 'non-issue.'"

Elementary/middle school students said that GLA should be reported on the report card for parent communication. Another group of elementary/middle school students talked about the consistency the GLA brings to evaluation when students move from school to school and noted, "All schools do things differently so it's difficult when you switch."

Although Grade Level of Achievement reporting initially was met with trepidation and was difficult to understand, the quantitative data indicated that this is no longer the case. Seventy-seven percent of educators and students agreed that it was easy to determine the grade level at which students performed. Parents were in close agreement as well with almost 73% in agreement with the statement that *It is easy for teachers to determine if a student is performing at, above, or below grade level*. Another survey item was *I understand what it means to say a student is performing at, above, or below grade level*. Educators and parents were very close and in high agreement with the statement, with 92.3% of educators and 93.9% of parents strongly agreeing or agreeing that they understood the meaning of performance of "at," "above," or "below" grade level (see Table 32).

Table 32
Grade Level of Achievement Reporting

Item	Educator			Student[13]			Parent		
	% SA/A	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**	**% SA/A**	**% D/SD**	**% DK**
It is easy for teachers to determine if a student is performing at, above, or below grade level.	77.4%	21.0%	1.5%	77.1%	11.8%	11.1%	72.6%	17.6%	9.8%
I understand what it means to say a student is performing at, above, or below grade level.	92.3%	5.1%	2.6%				93.9%	4.3%	1.8%

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know*

To check the perception that educators have difficulty in accurately reporting student achievement with highly mobile students, a statement was included in the survey to confirm if this was indeed the case. Over three-quarters of the educators and over half of the parents agreed that accurate student achievement reporting was difficult when students moved from school to school. Over half of the secondary students and about 71% of the elementary students agreed with the statement, and about one third of the secondary students did not know if it was difficult for educators to accurately report student achievement when students moved from one school to another.

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[13] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Table 33
Achievement Reporting and Student Mobility

Item	Educator			Student[14]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Accurate reporting of student achievement is difficult when students move from one school to another.	76.4%	19.9%	3.7%	52.1% (SS) 70.9% (ES)	13.2% (SS) 29.1% (ES)	34.6% (SS)	56.2%	21.0%	22.8%

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know*

Grade Level of Achievement Reporting is designed to help determine how well different programs are working for different groups of students, and to provide information to various stakeholders for evaluating the impact of education programs. This information was expected to be helpful for monitoring provincial trends for various groups of students and those with high mobility rates. Both educators and parents agreed that the GLA reporting was useful for monitoring student progress and tracking student history across schools (see Table 34).

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[14] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Table 34
Achievement Reporting and Tracking Student History

Item	Educator			Student[15]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Reporting students' performance at, above, or below grade level will be useful for monitoring student progress.	87.1%	10.3%	2.6%				94.1%	3.7%	2.2%
Reporting students' performance at, above, or below grade level will be useful for tracking individual student history across schools.	80.2%	15.6%	4.2%				84.8%	8.6%	6.6%

Note: *Data for the items were clustered according to positive, negative, and don't know.*
Percents were calculated using the total number of responses for each item.
SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

Most educators reported many positive aspects about GLA reporting and its impact on education, but a middle-school principal said there was a continuing need to focus on GLA reporting. Some clarification about the GLA reporting still seemed necessary because one elementary educator was concerned about what constituted "below grade level" and wondered if this was consistent across other school districts. She said, "In our board [school district], students have to be two or three grades below [grade level] before we can report as 'below grade level.'"

Another elementary educator was concerned about the report follow-up in addressing student needs, and asked, "What is the point of saying your child is four years behind without intervention?" Another elementary educator was concerned about a child's self esteem if the grade level was indicated in a document. The elementary educator said she was "OK with GLA but don't tell the child because it is bad for self-esteem." Finally, parents may need more information about the derivation of the reported assessment information because one said, "GLA descriptors don't seem to be based on testing."

Although some educators had reservations about hurting students' self esteem by reporting grade levels, the quantitative data summarized in Table 35 indicates that about two thirds of educators strongly agreed that reporting students' performance at a particular grade would be useful for encouraging student learning.

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[15] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Table 35

Achievement Reporting as Encouragement to Learn

Item	Educator			Student[16]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Reporting students' performance at, above, or below grade level will be useful for encouraging student learning.	65.8%	27.5%	6.7%						

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know*

The quantitative data showed that educators, students, and parents generally agreed about the usefulness of the GLA reporting. In addition, the Grade Level of Achievement Reporting rated as a positive element in education except for one item where the educators were not highly in favor. This one item that was rated low by educators was *Reporting students' performance at, above, or below grade level will be useful for evaluating teaching*. On this item, 41.2% of the educators agreed, but over three quarters (77.4%) of the parents agreed that it was useful for evaluating teaching. However, as indicated in the opening paragraph of this section, Alberta Education will not use GLA data to evaluate jurisdiction, school or teacher performance unless a Ministerial review is undertaken.

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[16] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Table 36

Reporting Students' Performance At, Above, or Below Grade Level will be Useful for Evaluating Teaching

Item	Educator			Student[17]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Reporting students' performance at, above, or below grade level will be useful for evaluating teaching.	41.2%	54.6%	4.1%				77.4%	15.8%	6.9%

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know*

Decision Making

Decision-making is an important category that emerged from the views expressed by educators. Representatives of elementary and secondary teachers and administrators noted their use of both classroom-based assessment data and provincial standardized testing results for the purposes of benchmarking, goal setting, sharing decision making, and placing students.

In the areas of benchmarking and goal setting, senior high school teachers described their use of assessment data to analyze individual class performances and to compare their students' achievement with those in other classrooms and schools. Senior high teachers, in particular, outlined their use of software programs to examine discrepancies in their students' expected and actual scores in classroom assessments and provincial standardized tests. At the elementary level, teachers said they used classroom and provincial achievement test scores to demonstrate improvement and to assist in the formulation of annual school plans, e.g., "We look into the results and use them for looking at programs, staff assignments potentially, adding resources to support teachers and students" and "Admin has increased the literacy coordinator from half-time to full-time because we have so many kids below reading level." School administrators in schools that spanned both elementary and junior high grades highlighted the value of Provincial Achievement Tests and Grade Level of Achievement Reporting for maintaining consistency across schools when individual students move and for assessing how their schools and school districts were doing relative to others.

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[17] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Importantly, school administrators stated that they use assessment data of all kinds—classroom, provincial, and specialist—to share decision-making. For example, one elementary assistant principal described how he and his colleagues invited parents to participate in decisions about students because "we are in partnership in programming." As well, he outlined using assessment data when teachers, parents, and program specialists met to make decisions about individual students, as did a secondary school assistant principal:

> *Every semester before we enroll students in new courses, there's an examination of their program and we all profile before the students come in. Look at IPPs, multiple intelligence tests. We look at their scores from previous assessments. Talk to their other teachers, especially if it is considered that the student is not able to do the course. We would also involve the parents in that situation as well.*

An elementary school principal and a teacher in the same school outlined how educators in their building sought as much assessment data as they could to inform classroom instructional practices and to assist with significant decisions such as the formation of reading groups, ability grouping, and even grade retention and promotion. Similarly, a senior high school teacher explained that teachers in her school used the results of Grade 9 Provincial Achievement Tests to place students in Grade 10, although she observed that placements based on Grade 9 achievement test results were not always appropriate.

The examples of decisions informed by student assessment data that study participants provided to the research team demonstrate the powerful potential of good assessment, if decision makers know the strengths and limitations of various forms of student assessment. Used improperly, virtually any assessment possibly can harm the very individuals it is designed to help. Used responsibly, assessment data constitutes one of the most valuable tools available to educators and policy makers. As described in the next section, educational leaders have a responsibility to develop the skills and knowledge needed to establish fair and accurate student assessment practices in schools, districts, and the province.

Leadership

Participants in The Alberta Student Assessment Study recognized the pivotal and complex role of educational leaders, particularly focusing on school principals and vice/assistant principals, in establishing accurate and fair assessment practices in classrooms. As outlined below, participants described how important it is for principals to operate with a strong assessment knowledge base and with the support of the members of their school communities. In addition, study participants recognized that school leaders need to make hard decisions to promote high quality assessment that supports best teaching practices. They also noted how school leaders must guide and support teachers' professional learning. Importantly, the role of student leadership emerged as a construct encountered too rarely in the educational literature.

Leadership credibility. It was a parent who observed that it is the principal who "sets the tone" in a school when it comes to student assessment practices. This is particularly interesting in light of the collective response of parents to the question *Principals and vice/assistant principals know a lot about student assessment*. The responses, summarized in Table 37, indicated that 56% of parent respondents agreed that school leaders are knowledgeable about student assessment. Nearly one out of three parents responded that they do not know the level of assessment knowledge that school leaders possess. Similarly, approximately 60% of students agreed that "Principals and vice/assistant principals ensure that students are assessed fairly," while slightly over one in five of student respondents disagreed with the statement. In contrast, nearly 80% of educators who completed the survey agreed that school leaders have a strong level of knowledge about student assessment. This pattern of parent, student, and educator responses suggests that parents and students have too few opportunities to communicate with principals and vice/assistant principals in ways that would allow school leaders to establish and maintain assessment credibility. An alternative explanation is that school leaders do not perceive that establishing assessment credibility with parents and students is an important part of their professional practice.

Table 37
Principals and Assessment Leadership

Item	Educator			Student [18]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Principals and vice/assistant principals ensure that students are assessed fairly.	71.1%	21.1%	7.7%	59.3%	21.6%	19.1%			
Principals and vice/assistant principals know a lot about student assessment.	77.8%	12.9%	9.3%				56.0%	16.3%	27.7%
Principals and vice/assistant principals encourage teachers to expand their assessment practices.	92.8%	7.2%	0.0%						
Principals and vice/assistant principals help teachers learn more about student assessment.	76.0%	20.8%	3.1%						

Note: Data for the items were clustered according to positive, negative, and don't know.
Percents were calculated using the total number of responses for each item.
SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

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[18] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Further evidence that supports the parent statement that the principal "sets the tone" came from a senior high school teacher who described the principal of her school as someone who "had a vision and it was that learning is the focus, not teaching…. He focused on the learning (by asking four questions):

What you want them (students) to learn?
How do you know when they have learned?
How do you know if they do not?
What will you do after they have learned?

In the teacher's opinion, her principal was the first of over 20 administrators with whom she had worked who "made it about learning and gave the tools to make it happen. Prior to him it was about numbers, generating, needing to improve performance by 2%." Clearly, the teacher perceived her principal as establishing a strong focus on teaching and learning for which she is "indebted to him."

Teachers generally had a high level of respect for how their school leaders understand and focus on student assessment. For example, nearly 93% of educators agreed with the statement that *Principals and vice/assistant principals encourage teachers to expand their assessment practices*. Further, 76% of educators agreed that *Principals and vice/assistant principals help teachers learn more about student assessment*, while over 71% agreed that *Principals and vice/assistant principals ensure that students are assessed fairly*. In addition, one senior high school teacher described how his principal "goes to bat for us and does a wonderful job of helping us to develop the assessment we need."

However, alternative views about the knowledge base of school leaders were presented. For example, one elementary teacher stated that there should be a "presupposition that educational leaders are knowledgeable about assessment or do not have a narrow perspective and understanding of what constitutes good assessment," but went on to state that "I would say we do not have assessment leadership in the school." Similar disappointment was expressed by a senior high school teacher who claimed that, "we do not work in teams and each of us does what we each think we can do (about student assessment)." These unfortunate descriptions of assessment leadership were complemented by two senior high school administrators, one a principal and the other an assistant principal (in different schools) who cautioned, respectively, that the "Principal Quality Standards should include assessment knowledge" and "The biggest mistake that an administrator can make is to jump into a policy (about assessment) without an understanding."

Educators, students, and parents across elementary and secondary levels in several school districts articulated the notion that effective leadership of assessment practices is linked in important ways to the general support base that school leaders have within their educational communities. For example, an elementary student in an urban K–9 school described the relationship between the desire of students to do their best and a welcoming school culture: "Our principal is always smiling and makes school not threatening." A parent in a low SES inner-city school worried about the support base and assessment leadership capacity of the principal of his daughter's school, a newly appointed and inexperienced elementary principal. He noted that principals in the school typically stayed for about two years and then transferred to other communities within the city and said that he was "not sure if he (the current principal) has the support of his staff." He expressed his deep sadness that his daughter's school, one with which his family had generational ties, suffered from such a perceived level of leadership instability. A mother of a child in the same school stated that principal's support base was weak because he had "not enough training about how to work with school councils" or sufficient "training in management and budgets." At the senior high school level, a teacher repeated a rumor in his school district that "some schools closed their shop programs to get more academic students" so they could raise their students' achievement average. Clearly, the general credibility of some school leaders within their educational communities affects their capacity to provide effective leadership in assessment practices.

Hard decisions. Study participants, who represented schools and school districts of all kinds, focused collectively on the importance of ensuring that principals possess the capacity to make hard decisions about the kinds of assessment practices that are acceptable. They talked about the need for school leaders to be able to initiate conversations about student assessment and to establish standards for acceptable assessment practices throughout their schools. They also linked decision-making about student assessment to the overall quality of instruction. For example, two elementary school teachers perceived their principal's ability to promote dialogue about student assessment as important support for their work in classrooms. One of them described the principal's support as including the arrangement of "times for us to talk about PAT (Provincial Achievement Tests) results and to set up goals for improvement." This positive perception of principal support was similar to that of a teacher who expressed his gratitude for having the principal of his rural high school prompt the teaching staff to focus more on student learning and "not so much on teaching." School administrators themselves articulated their belief that assessment leadership must be one of their priorities. An assistant principal in a senior high school, where there was widespread pride in their collective growth in learning about desirable student assessment practices, attributed teachers' professional learning to the school principal. At the elementary level, a principal emphasized his conviction that leading assessment was one of her professional obligations as an instructional leader. A teacher in a suburban junior high school described how "the principal at this school emphasizes thinking about curriculum but also (about) using a variety of assessment strategies. We do have discussions about it in staff meetings and PD sessions."

School leaders have a responsibility to establish acceptable assessment practices, according to those study participants who engaged in focus group and interview conversations. A principal of a large urban senior high school emphasized how it takes "courage to note the ways that change is needed in teacher practice." A holder of a doctoral degree, he said that he is motivated by asking himself and his colleagues, "Do you want your daughter or son taught in this way?" A teacher in the same senior high school described her belief that the "principal needs to make sure the teachers assume responsibility for failing students." This demanding perspective was echoed by a teacher in a rural senior high school who observed that, "He's pissed people off along the way" but "he's tenacious with his commitment to do what is right for kids!" An assistant principal in the same rural school said that her principal is "not afraid to poke with sticks at people. He challenges their thinking. He is relentless." An urban elementary school principal stated that, in her opinion, "some teachers have stopped their professional learning and it is the role of leaders to get them started again."

Teachers at both the elementary and secondary school levels described what they believed to be a very powerful leadership action, a requirement that teachers "open their mark books with colleagues and talk about discrepancies and questions." For example, a teacher in a senior high school stated that, as a result of her principal's insistence that she and her colleagues talk about their assessment practices, across subjects and not only within the same subject area, she and other teachers ended up critically analyzing their commonly accepted practice of assigning zeros to students who did not complete homework or hand it in on time. The ensuing dialogue led to the revamping of homework and classroom assignments so that they mapped onto provincial curriculum guides significantly and proportionately. The teacher reported that zero grades were a thing of the past and that assignment non-completion was virtually eliminated. She also said,

This was a really life-changing activity and (it) continues on now. It was a risky thing because teachers are very private...and it opened things up.

This teacher's experience reflected the call of one of her elementary school colleagues for "instructional leaders who are not complacent with the status quo."

Educational leaders at the school district level also play a role in promoting sound student assessment practices, from the perspective of study participants. For example, a high school teacher recalled how the district superintendent had used a district professional development day as an opportunity to review Grade 9 Provincial Achievement Test scores and to provide a review of achievement trends. The senior high school assistant principal observed that his district offers strong encouragement to school staffs that wish to focus professional development resources on student assessment. An elementary school vice principal reported that her school district leadership had mandated a "no zero policy" in an effort to promote dialogue about fair student assessment practices. These descriptions of district level promotion of professional growth about student assessment were accompanied by a caution from a senior high school teacher about that the positive impact of these efforts can be reduced if teachers "felt like (they) were being compared and needed to do better." On the other hand, a senior high school assistant principal appreciated the district focus on assessment but worried that there was no accompanying attention to dialogue "about why discrepancies exist between classrooms."

A call for more stringent examination of student assessment practices came from a senior high school teacher and also from three senior high school students. A male student said that he "wish(ed) that there were consistent standards across the school for passing and failing." A second male student observed, "teachers need to be evaluated more often and [with classroom visits] not scheduled (i.e., random). "A third student stated her belief that if the principal, "Mrs. X is coming in then the teacher acts so differently on those days." The students' concerns were echoed by the senior high school teacher who claimed that, "I think teachers need to be assessed more frequently on the kinds of assessment they do in the classroom."

Leading professional learning. The nearly 93% agreement of educators with the statement that *Principals and vice/assistant principals encourage teachers to expand their assessment practices*, highlighted earlier in this report, is extremely high. However, the details of how "encouragement," is manifested are complex and multidimensional, as evidenced in the previous section, *Hard Decisions*. In fact, the high level of detail that characterized interview and focus group conversations suggested that the challenges associated with leading professional learning about student assessment, when they appear, can be highly stressful for all concerned. Nonetheless, as an elementary principal observed, "Teachers have to be on board to make assessment of PD sustainable" and study participants perceived that attention to leading professional learning was particularly important. A more detailed description of what study respondents said about leading professional learning is provided in the following section, titled *Professional Development and Teacher Knowledge*, and in the study recommendations. However, this component of the leadership section will address the advice about professional learning that study participants suggested school leaders consider carefully.

The first suggestion was provided by an urban middle-school principal who suggested that school leaders, who wish to focus on professional learning that relates to student assessment, seek first to "work with the willing." That is, he opined that greater success, in the form of teacher learning and actual improvements in classroom practice, occurs when educators participate voluntarily in professional learning. Second, the same individual stated that it was important to match learning initiatives with organizational needs and individual teacher goals because, "If you connect initiatives to their own sense of wanting to do something you have a better chance of success."

A senior high school teacher claimed that he and his colleagues felt empowered when their principal modelled learning about assessment. Other educators, in both elementary and secondary schools, highlighted other forms of support for professional learning about student assessment that they believed benefited them. These supports included "timetabling so that core area teachers can collaborate on a regular basis," structuring opportunities for "colleagues to observe in the classroom even though it is a bit artificial," and "taking teams of teachers (even entire staffs in small schools) to conferences focusing on student assessment." Study participants suggested that principals "do not have to be experts in curriculum or assessment" themselves but, rather, provide opportunities for teachers to collaborate, provide funding, offer a framework for professional development, bring in outside expertise, and appoint "learning coaches" from within the school. An elementary teacher emphasized the importance of providing time, funds to study, and opportunities to see what is being done in other school boards.

The need for principals to make their leadership of professional learning a priority was emphasized by a Grade 4 teacher in a suburban K-9 school who said:

> *There is a need for instructional leadership to prioritize it [professional learning]. We need more leaders who are instructional leaders rather than managers—we need to promote teachers who are doing a good job in teaching and know the curriculum but we get a lot who are nice people, good with people and with budgets, but [who are] not strong instructional leaders.*

The same teacher cautioned that, "Some principals are complacent about instructional leadership because they have been around a long time and their view is if it is not broke then don't fix it." However, the benefits of professional growth in the area of student assessment were described by an assistant principal in a small rural school who enthused, "Finally we are being treated as professionals. The new reporting system allows us to work as professionals."

A teacher in a mid-sized rural high school shared this positive outcome and said,

> *All English teachers have common prep time. In my 20 years I've never had such rich DAILY conversations about learning outcomes, assessment strategies. [In the] second semester, subs [were] brought in for one class a week to release [teachers] for shared professional development time.*

Finally, the importance of time needed to sustain student assessment innovations was emphasized by an elementary school principal. The assistant principal in the same small rural school mentioned, independently, her belief that she and her colleagues understood that improving student assessment practices in a sustainable way meant looking at their learning "as a process." That is, she stated her conviction that learning about student assessment, and the changes in assessment practices that the learning engendered, had to occur over time so that educators could act on their learning and so that school community members could understand, support, and participate in the change process.

Student leadership. An important finding of this study was the positive perception of the potential role of students in decision-making about the assessment of their learning. As will be discussed in the section titled "Communication and Relationships," students who participated in this study expressed their strong desire to have their views considered when decisions are made about student assessment practices and when decisions are made about programming for individual students. In fact, students' suggestions were complemented by a senior high school assistant principal who urged, "(We) need more and more venues for students to talk about their learning in Alberta in policy-shaping ways."

Professional Development and Teacher Knowledge

In any educational system, establishing, maintaining, and enhancing teacher knowledge is key to ensuring optimal practice. This section reports the main issues that emerged from the study data in relation to teacher knowledge and professional development. Specifically, four subthemes emerged: needs, formats, challenges, and outcomes.

The subtheme "needs" encompasses teacher knowledge and practice, and the perspectives related to partnerships teachers had or would have liked to have with various stakeholders. "Formats" of professional development is presented from two perspectives, professional development internal to the school and external professional development. The subtheme "challenges" covers a wide range of different aspects, such as the confusion about assessment that interviewees reported, and negative emotions that too often arise when discussing assessment. It also includes a discussion of missed opportunities for professional learning, perceptions of a lack of accountability within the educational system, concerns with time, and the ineffectiveness of one-shot professional development. Finally, the "outcomes" of professional development are presented as they relate to increasing teachers' knowledge and skills and their levels of openness.

Educators in this study definitely were interested in the topic of professional development. They readily discussed what professional development programs they had undertaken, what had been effective for them, and what was largely ineffective, and they could articulate why. Teachers held assessment topics as professional development priorities. They generally wanted more professional development, particularly that which is explicit and practical. Much of the professional development that was available was not perceived as effective for one reason or another, and this frustrated teachers when they engaged but came away without attaining or refining their knowledge, skills and resources about assessment. The range of professional development topics discussed in this study was considerable as were the providers. Teachers demonstrated considerable awareness of their professional development needs and were keen to access ongoing learning opportunities. This was a strong indicator of the sense of professionalism within the educational community. The opinion of teachers about the quality of the professional development on assessment was highly variable, dependent upon their personal experiences. Professional development remains a contentious area for Alberta teachers.

Needs. Teachers desire to engage in professional development focused on improving their knowledge and skills about optimal assessment and this was an overwhelming theme throughout the interviews. Many appreciated the professional development opportunities that had been made available to them; however, there was clearly a need for more targeted professional development and greater access to expertise and knowledge specifically about how to undertake sound assessment. A veteran teacher described his professional development experiences:

> *Professional development is fabulous. I am learning so much. It is amazing to me. There are so many supports in place in terms of curriculum. Curriculum documents and people are available here much more so than in [another province]. I have the opportunity to go to resource meetings and they give you really great ideas about how to motivate students.*

He also stated that he found the time he had with the principal as part of this process both enjoyable and informative, and felt that it had reenergized his teaching and assessment practices.

Many voiced statements that professional development was essential for teachers to engage with, and that it involved concepts of "teacher professionalism." One middle school teacher stated:

> *When there are new curriculum or a new assessment focus we need to engage with that not because we are answering to someone but because that is our job...a sense of professionalism, professional obligation. We want to be put up there on the same scale as doctors, etc., but they research ... and we would not want to go to a doctor who doesn't keep up with the latest research and [if they don't keep up with latest developments] they may lose their job."*

One aspect that emerged as a need was for more classroom friendly resources to inform teachers' knowledge about assessment practice. This was especially needed in areas where new curricula had been introduced:

> *[We need] resources that are tailored towards the new style of assessment that is coming out from research and the government, particularly in math if you want us to test kids with these in-depth problems and bring out the resources that are tailored to the curriculum we teach. Because right now what we have to do is search on our own for something that is tied to what we are doing. So if the government can provide teachers with a resource that provides assessment probes that teachers can use then, that would be great. There is a lot of stuff that comes out that tells teachers what you should be doing but not a lot on how to do it that ... provides in-depth problems, and that would be great. Tailored to assessment not just so that I can photocopy and directly use but also to use as exemplars of problems, and from students [exemplars or work samples] so that you can see what they look like at different levels.*

Table 38 displays a summary of responses to the survey item *Teachers know a lot about student assessment*. Approximately 83% of educator respondents agreed that their level of knowledge was substantial in this area. Elementary students' perceptions also aligned with teachers with almost 98% of students agreeing that teachers know a lot about student assessment. Secondary students and parents were more conservative in their perceptions with 62% and 63%, respectively, agreeing with this item. Even though educators rated their knowledge as high, many did not articulate this sentiment overtly in the interviews; rather, they tended to report more on their assessment practices. This was important considering that they were asked what they knew about assessment as well as what was going well in terms of assessment in their own practice. Many teachers also reported wanting to know more about how to do assessment more appropriately and how to use assessment data more effectively in helping their students to learn.

Table 38
Teacher Knowledge about Assessment

Item	Educator			Student[19]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Teachers know a lot about student assessment.	83.3%	14.1%	2.6%	62.9% (SS) 97.9% (ES)	15.8% (SS) 2.1% (ES)	21.4%	63.3%	15.6%	21.1%

Note: *Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know*

Within the qualitative data there was a range of views expressed about the level of teacher knowledge. The continuum encompassed statements that indicated that teacher knowledge about assessment was increasing as a result of professional development, e.g., "[I] keep current with best practices. Attend workshops, inservices, keep up with the literature in the field. Lots of it is available." An elementary teacher stated, "feedback can only be as good as the test and test making is a highly developed skill and I don't think a lot of teachers have that skill." At the other end of the continuum there were teachers and school leaders who indicated that there were gaps in teacher knowledge. For example, secondary teachers stated:

> *"We really don't know how to assess. We're lost about how to assess many of our students."*
> *"Assessment isn't a new fad that we will drop off. It's the way things should always have been done. It's a clearing up of bad practices that we shouldn't be doing. It makes us better teachers and focus on the right things."*
> *"Teachers should know more about making assessment objective."*

A less experienced secondary teacher indicated that "there is a lot of support which aided me to develop my understanding and improve the gap from university education." A colleague indicated a desire to "hear how to do student assessment from teachers in the alternative stream" because these teachers appeared to be more flexible with their assessment practices. Causes for concern included statements that "People need to know the Program of Studies." and "Some teachers didn't know where their curriculum guide/Program of Studies was."

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[19] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

An upper elementary teacher stated:

> *There are differences in the understandings across all the staff and that is where the misconceptions are coming in when people don't have the shared understandings. Too, part of that is that once you have had learning you need time to process and plan and talk about it and when you have been at a conference there needs to be time to plan and process and reflect on the learning.*

Concerns were also expressed by school leaders in relation to teachers' level of knowledge about assessment. A lack of engagement in professional development was a stated concern for numerous teachers and administrators. For example, an administrator in a K-9 school stated:

> *Some of our staff haven't read anything professional since university. I respect that but education looks different and we have some faculty who are reluctant to address our school's focus. We have some educators in the building who have stopped learning. Teaching is like you have to forget what you learned before. Now we're teaching "old dogs new tricks."*

The need to increase teachers' knowledge about assessment was expressed by an elementary principal:

> *The focus of our professional development last year was on assessment for learning so teachers should be well versed. This year we've focused on the collaborative angle. It stimulates a lot of conversation among teachers about exemplars above, at, and below grade level. They are pushing each other's knowledge.*

Even school and district leaders had concerns about the level of knowledge about assessment at their level, for example:

> *"Principals and superintendents don't necessarily learn about assessment in grad programs."*

The importance of assessment in guiding teachers' professional development choices with the view to altering practice emerged regularly in the interviews. A secondary principal stated that an important element was to "give a lot of time to teachers to engage with each other around assessment." Another said, "Make it a priority of the school." In the elementary setting, a principal stated, "Good professional development helps improve assessment." Another elementary school principal indicated the importance of contextualizing the implementation of knowledge, "Many practices have to be learned in the classroom." An assistant principal in a rural elementary school stated, "We think of assessment as a process and we're taking more time. They've given us time to get it done well." A K–9 school assistant principal indicated there were considerable advantages in encouraging teachers to engage in reflection on their practice:

> *[It] takes reflection on practice and being able to have open mind, and see what others are doing, see how you are doing in comparison to your peers, so ranking again for educators can have a benefit that way.*

He indicated that reducing teacher isolation was a positive step towards more consistent and sound assessment practice.

Elementary teachers indicated that there have been changes to assessment practices over time as a result of the Alberta Initiative for School Improvement (AISI) projects:

> *When we did AISI a few years ago, we built rubrics and did a lot of writing with rubrics and exemplars. ... Last year as part of the AISI we talked about how assessment is something we wanted to explore more.*

Another upper elementary teacher reported:

> *There is still a lot of work to be done. It is personal experience but I know what is going on in my school as well as other elementary teachers and we are working on this [assessment] and trying to change things.*

She continued by reflecting on her experience as a parent and how there appeared to be issues in the high school setting around assessment practices:

> *I know there are things happening that should not be happening. The grading, the recording, it is not based on what they [the students] know but on how they [the students] play the game, and I question if the assessments are actually assessing the curriculum outcomes or is it just the same test that has been used over the years and it is also a power thing [with the teacher who says], "If you don't listen to me then ...." It is almost a one chance sort of thing and then they are on to the next thing rather than going back over things and relearning.*

Secondary teachers also indicated they were engaging with assessment issues and challenges. One stated:

> *Curriculum guides should be user friendly. You can get what you need out of them but you have to work at it. Teachers know where they are on their shelves but don't use them.*

Another teacher reported the value of increased transparency by "sharing the marks book. That's been a big thing. Waiting to open these up in front of each other it kind of decreases that fear." This same teacher reported that the principal had encouraged all staff, particularly those in similar disciplines to work together to increase consistency in assessment practice and to explore why there may be significant differences in marking across teachers within the same discipline.

For some teachers, professional development was related to accountability and professionalism and they welcomed more feedback and advice from their school leaders and experts in assessment;

> *Assessment needs to be looked at holistically, and it needs to be reflected on by the government, and teachers really need a balance of professional development opportunities and more feedback from administrators or consultants to help them out and have opportunity to go to other classrooms and see expert teachers work and what works for them, and we tend to close our doors a lot and we are on our own and it would be so helpful.*

Involving students, parents and school leaders as partners in teachers' ongoing learning about assessment emerged within the subtheme "needs." An elementary teacher stated, "Kids have to be central to the ongoing improvement of assessment." Another elementary teacher indicated that a key partnership in schools was between the teacher and his/her vice principal and principal, "I want to see more feedback from administrators." A senior high school teacher indicated that parent involvement in professional development would assist not only greater understanding for both parties but also that "parent participation is professional development that helps to maintain consistency."

Formats. Conversations with interviewees about professional development were not only about content but also about "format." Many teachers highlighted this issue when they discussed professional development that had been successful or professional development that were largely ineffective in altering practice. Development formats were discussed in relation to activities and opportunities internal to the school and those external to the school.

The most significant issue to emerge within school-based professional development was the desirability and value of team-based or collaborative activities, particularly if these could be scheduled during the school timetable. A secondary school teacher said, "Give core teachers common prep time." The advantage of this was identified by the secondary school teacher who pointed out the ongoing sustainability of a professional development initiative in which all English teachers have common prep time. Another secondary teacher reported that "learning teams dialogue once a month about assessment." Teachers and administrators reported that these activities were most useful when teachers were able to come together to discuss, reflect, and produce resource materials:

> *We met in teams across curriculum areas for richer conversations* [secondary assistant principal].
> *[The] best way to learn about assessment is to give them time together, working collaboratively, giving assessment and assessment practice a* purpose [secondary assistant principal].
> *[Our] mark books are used to align with curriculum and demonstrate knowledge and understanding* [senior high school teacher].

One teacher cautioned that collaborative teams needed to have enough structure so that professional development activities were purposeful and yet not too prescriptive:

> *In our school we have tried to develop professional learning communities (PLC) both within and across schools and that has been a fairly good start. But perhaps it was a bit too prescriptive at the start, where we started to look at formative assessment relative to inquiry. Then over time they [the administration team] worked out if they backed off and let the PLCs work on their own focus for assessment...Initially it was not very productive, but now, because of the freedom, it has been more productive.*

Working with colleagues can also support the learning of the professional development facilitator. An elementary assistant principal stated:

> *Now I'm a learning coach. It is a great opportunity. There are frustrations but it is great to work with teachers. You're there to support but you learn from them and from the conferences you get to go to.*

Another administrator indicated that all the teachers "present when they return from a conference" so that it increased information sharing in the school. A secondary assistant principal stated that she shared her "graduate program information about assessment with staff" so that there was research-based information coming into the school to inform their professional development.

The Alberta Initiative for School Improvement (AISI) projects frequently focused on improving assessment. Leaders supported the AISI projects and stated that this initiative had enabled teachers to work together to improve their practice:

> *The best thing is AISI, providing teachers the opportunities to come together with the support of outside experts for teachers to reflect upon their assessment practices and make the changes they want and need to make based upon the students they are teaching.*
> *More needs to be supported. AISI is a gift because it allows us to buy time to work together. You can't do it otherwise. You need to resource it, so if more is wanted, it needs to be resourced.*
> *I think most of what you find is if you provide the resource and support, there are teachers who are curious about their practice. Teachers are people who want to do the best job they can and all they need is support, inspiration, resources, and leadership to do the work.*

The other advantage identified by an administrator was that teachers shaped many of the AISI projects themselves and so it has the advantage of being more of a bottom-up approach, "Our next AISI project is assessment. It's really healthy. There is a groundswell coming from teachers [who] are saying we need and want this."

Both secondary and elementary teachers alike positively reported AISI support. The funding was used in many schools to support teachers' collaborative activities and resource development focused on improving assessment practice. The following is a sample of some of the reports made about AISI projects and the reception these have had in the schools:

> *When we did AISI a few years ago, we built rubrics and did a lot of writing with rubrics and exemplars. ... Last year as part of the AISI we talked about how assessment is something we wanted to explore more* (elementary teacher).
> *Keep the AISI thing going* (elementary teacher).
> *Now that I'm continuing to perfect my craft, that's the assessment journey, so formative assessment is coming to the forefront. AISI is the king of the world for letting me see the world* (secondary teacher).
> *AISI projects helped as well, to free up teachers to work collaboratively on assessment. In our school we have a very strong community of teachers who do want to improve assessment and have been working to that end* (secondary teacher).

One elementary principal, who noted that AISI had to be embedded into the school processes, "AISI is great opportunity but it can be an add-on," although, it sounded a cautionary note.

Mentoring involved teachers working with other teachers, particularly when an expert teacher was paired with a less experienced colleague. Many interviewees reported that "teachers learn best through peer coaching." Frequently stated was the need to "see expert teachers at work" or for opportunities to work "with an experienced teacher." As one novice stated:

> *Going into another classroom and watching what the mentor's practice has been [helpful] because it is in the right context. [I can see] how conversations are being driven and what works for them, and knowing that they do that every day. It is the most powerful [experience] to watch for half a day. It was really helpful. The professional development sessions are really helpful if it is really practical and you can take it right back into the classroom. Not only at PD are you listening to the speaker but you are also talking to other teachers and you don't always get those opportunities to talk to other teachers about their ideas and practices, and I can write down their ideas and take them back to my classroom.*

In the interviews, educators were asked about what they would like to have in their professional development activities. Many teachers reported a desire for greater access to experts in assessment, not only from within their peer group but also from outside the school, so they could share and develop assessment tools. A secondary teacher stated her wish to "talk to experts and ask the question, "how does that apply to me given my reality?" These professional development needs were important given that survey responses indicated that 83% of educators indicated they know a lot about assessment. That is, they indicated they possessed considerable knowledge about assessment but they recognized they need to access more expertise. Many teachers wanted access to experts in the field of assessment on an ongoing basis.

Some educators indicated more personal orientations to professional growth with one elementary teacher stating she "learned about assessment on the job." A number of interviewees indicated that becoming parents themselves made assessment more personal and more important to get it right for other people's children: "Becoming a parent was a defining moment in my teaching career."

A number of external-to-the-school activities were cited in the interviews as excellent professional development. For example, both secondary and elementary teachers reported marking the Diploma and Provincial Achievement Tests this way:

> *The best PD.*
> *Marking in Edmonton, every single core teacher should be given the opportunity to mark exams. That works. It reinforces what you do and opens you up to ideas you might not have thought of. [You develop an] understanding of the process, and how to teach it... all that sharing with colleagues.*
> *I've been on the marking floor in Edmonton. It's a careful, fair, judicious process, an excellent professional development opportunity.*

Teachers' comments indicated that marking provincial standardized tests and examinations enabled them to understand better the behind-the-scenes construction of assessment instruments, to see how carefully this was done, and understand the training that went into ensuring marker consistency. Many of these teachers wished that similar approaches to consistency were adopted in schools for teacher-based assessments and said they would welcome professional development processes that enabled teachers to work together to this end.

A surprisingly pervasive perception emerged in this study related to technology, its use in the classroom, and its potential to support the assessment and reporting of outcomes. A secondary principal referring to reporting software currently available indicated that "in the future perhaps we can use technology to link learning and curriculum outcomes better." He reported that this development was already underway and that he was awaiting these developments.

Secondary teachers reported how technology supported their professional development through Internet resources, "The district has a website for teachers to post their assessment ideas" and we "bring in ideas for discussion from webcasts." These teachers indicated that these technology-mediated mechanisms enabled greater sharing of materials and increased access to experts and information.

Although many educators reported wanting greater collegial collaboration within their schools for professional development purposes, there were also outside agencies and activities that were perceived as useful. For example, the Alberta Assessment Consortium (AAC) was cited numerous times in interviews as a powerful professional development resource. An elementary assistant principal reported, "AAC is working well with strong formative and summative assessment practices, tapping research. Yearly conferences have been instrumental in engaging schools."

Among the outside professional development events cited by respondents were various education conferences. Some teachers attended conferences in teams and this "common participation" was reported as useful in engaging teachers in dialogue once back in schools. Conferences as a professional development approach, though, were contested in terms of effectiveness, because many teachers did not indicate they brought about changes in practice. As one elementary assistant principal stated, "Teachers' conventions were good for networking but don't change practice." A secondary teacher stated she liked them because "you don't have to plan two days." A secondary principal felt that professional development that was external to the school context was "hit and miss," particularly when scheduled as a single event.

Time was frequently identified as a problem in professional development activities. A secondary teacher noted:

> *[Schools] need support in terms of time to learn. We need time to debate and discuss, time for professional development opportunities sponsored by whomever, and opportunities for district coordination of assessment training, assessment leadership, and they can act as a resource and a connector for their teachers because it comes down to a need for access to assessment. If this is important then let's make it important.*

An elementary teacher observed that there were "misconceptions when people don't have time to process PD activities" and stated her option that this reduced the effectiveness of the professional development. Another elementary teacher indicated that time was an issue for novice teachers:

> *Beginning teachers are in survival mode, learning to teach, getting subjects set up. I've awakened a lot over the past couple of years. What people have been using for 20 years may not be great but when you are in survival mode you use it.*

Parents' concerns related to the amount of time teachers spent away from the class attending professional development. A secondary teacher iterated a similar concern to that of parents: "Teachers don't always like leaving their students with subs [substitute teachers] while they go to professional development."

Many interviewees noted missed opportunities for professional development for assessment. For example, a teacher indicated he had not "encountered any really good professional development." A secondary teacher stated that "communities of practice [are] a waste of time but other PD days I learned a lot." Another elementary teacher did not like her professional learning community because it was "too prescriptive" and advised that it should be more focused on "teacher conversations." There was a need to ensure that the professional development was embedded but some was not, according to an elementary teacher, "Assessment should not be an add-on but integral to what we are doing." Some teachers felt that the "AISI leaders in the school are more visible than the ones in the area office" and they needed to be more available to teachers. They stated their belief that those who are not visible in schools were of less use and less effective.

Interviewees reported confusion about student assessment. For example, assessment terminology presented real challenges because they created misconceptions and confusion among school-based educators. An elementary assistant principal stated that AFL [assessment for learning] needed clarification. A secondary teacher stated "what we have now is teachers assessing areas where they don't have expertise." There appeared to be some differences in opinion about teachers' expertise in the high school compared with the elementary context: "Elementary teachers believe that high school teachers have a limited understanding of teaching and assessment for, and of, learning."

Confusion was reported as introduced by speakers at the conferences. One elementary teacher indicated that she had become confused about the purposes of the provincial exams as a result of a conference presentation when a "speaker from Finland said we were strange that we focus on teaching to the test when they don't do those tests and they focus on learning and it really made you think." The disallowing of Alberta Education personnel from making presentations explaining achievement testing, some aspects of diploma examinations, and the provincial Accountability Pillar at provincial teachers' association-sponsored conventions and specialist council events means that important opportunities to reduce confusion among educators are precluded.

Educators expressed a range of negative emotions related to the topic of professional development about student assessment. One secondary assistant principal described a principal-led professional development day when teachers had been encouraged to investigate why there were large differences in the marks assigned to students by teachers within the same department. He encouraged them to explore ways to increase the consistency of marking and grading but the assistant principal reported:

> *It is new. It is making people uncomfortable about their practices and teachers are no different to students. They come up with excuses why they can't do it. That is part of the evolution you have to go through. There are people who are angry and when ... there are people in the staff room who don't make eye contact and these are during conversations about assessment and holding the group [teachers] accountable for assessment. They [teachers] have all those skills and deflecting actions that kids have and with some they have that stone look on their face, not smiling, a stony look on their face, and you know they are not enjoying it or on the same page.*

Some teachers reported experiencing fear of new innovations, for example, when faced with new technology, "A lot of times it is fear. I was terrified about *SmartBoards* but in two minutes I got it." Some teachers expressed a level of defensiveness about working with curriculum leaders or administrators to improve their assessment practices. As one secondary teacher stated, "I think too if someone says my assessment is bad teaching practice, I'd be defensive. If someone said 'no that's bad' then I'd probably start crying. I'd be shocked and wonder why they think that."

The need for greater teacher accountability was reported in numerous interviews by teachers, assistant principals, and principals, but mostly by teachers themselves. Purposeful disengagement was identified as a real problem for some teachers. One secondary teacher was disturbed when some of her colleagues had the attitude that even with funding for professional development they remained disengaged, hoping the changes or new initiatives would pass over them:

> *A lot of time over the years the initiative comes through and then the [teachers'] perception is that it will pass. Now it is a literacy project but tons of money are pumped into it, and rightly so, but in this case it was perceived that it too would pass.*

Some teachers identified this as resistance to exploring new practices and understandings about assessment. For example, an elementary principal reported that it was "hard to convince teachers that there are many ways to assess and teach students."

Lack of teacher engagement was a common sentiment reported by teachers across all school contexts. A secondary teacher said, "We do TPGPs [teacher professional growth plans] but there is no accountability" and he indicated this needed to change. An elementary teacher stated that accountability was the most important point for her:

> *If we don't have buy-in from teachers with new curriculum—we have a new framework—it does not matter what you put in front of teachers. If you don't have buy-in then it is a waste of time. There are many good things in the new documents and yet there are some teachers who don't even know there is a new curriculum and there is no one making them do it. There are not enough who are meeting our professional obligation.*

An elementary assistant principal described some of these disengaged teachers as "little islands. They vote people on or off … They think they are doing fine [but] they don't have a clue … You can stagnate if you stick with the same people." She continued to describe how to move these "islands" along in terms of their professional growth, "For the islands, they need someone who is an expert in their own area who has bought into it [new ways to assess] and can show them." Additionally, she described how these individuals could be positively influence by, for example, conversations about assessment practices with respected colleagues.

Outcomes. The outcomes of professional development that emerged in the study data fell into two categories, first, knowledge and skills acquisition and, second, openness to new and better practices. Knowledge and skills acquisition related to the establishment of sustainable changes in assessment practices. Openness included a philosophical orientation that supported teacher reflection about assessment, transparency of professional practices, and ongoing improvement.

Educational leaders indicated the importance of a clear vision and of well articulated outcomes for professional development about student assessment. Further, they felt that professional development must result in improvements in the quality of teachers' knowledge and skills about assessment. They shared the professional development frameworks used in their schools and districts. The frameworks demonstrated teacher involvement in collaborative activities focused on improving student outcomes and using a range of assessment tools, e.g., both provincial standardized tests and examinations and teacher-made assessment tools, to inform decision making and professional development activities.

One school administrative team described how its members had developed a school professional development framework designed to increase the quality of teachers' assessment knowledge and practices. The theoretical underpinnings of the framework had been informed through the administrators' university graduate degree programs. The administrators related how they encouraged teachers to work together in teams to discuss and share assessment ideas and resources, and also to cross teams within the school to broaden discussions. This was not an isolated situation as a teacher had indicated that there had been a shift in her school from "teacher centered assessment to student-centered assessment."

Study participants indicated that there was a need for teachers to "keep an open mind, to see what others are doing" so they can "reflect on their practice" and make appropriate changes to their assessment practices. One teacher said, "We want young graduates to have capacity to question and support, while educational leaders and senior staff need to have the capacity to be open to questioning of their taken-for-granted assumptions and beliefs about assessment." However, participants indicated though that openness was not necessarily comfortable for all educators and that change tended to "make people uncomfortable about their practices." A teacher stated:

> *[The] first thing you need to do is to look at your practice yourself and look at what you are assessing and why. Once you do that then you need to challenge long held beliefs. Then you are ready to look at alternatives. [You] need a philosophical grounding, look at your pedagogy, and then you are more open to change and improvement.*

Educators also said they wanted more cross-district or cross-school professional development because they felt that this would expose them to broader conversations, different approaches to assessing students, and more opportunities to develop and share assessment resources and tools. One teacher stated she wanted more "external PD because it is good to interact in other systems for comparisons and so we don't become parochial." This was particularly important to teachers who were the only one of their type or discipline in the school, e.g., special education teachers, option teachers, or language teachers.

Preservice Education

The original design of The Alberta Student Assessment Study did not include a focus on teacher preparation in Alberta. Rather, preservice education did not emerge until the research team began conducting focus groups and interviews in Stages Two and Three of the study. A large amount of initially unsolicited information about preservice education emerged and this led the researchers to include preservice education, as it relates to student assessment in the province, as a topic within The Alberta Student Assessment Study report.

There are three main components of the teacher preservice section of this report: mixed perceptions of Alberta teacher education programs, need for a practical focus, and instructor and content preferences. "Mixed perceptions of Alberta teacher education programs" relates to a range of general observations and specific comments. "Need for a practical focus" includes the widespread call for pragmatics, the need for explicit teaching, and the need to highlight the responsibility for student assessment that is shared by all of the educators in each school. "Instructor and content preferences" includes suggestions for instructors with teaching experience in schools, instructor modeling of good assessment approaches and strategies, inclusion of alternative education assessment, and differentiated instruction and assessment.

Mixed perceptions of Alberta teacher education programs. Study participants' perceptions of Alberta's teacher education programs varied from open enthusiasm to open criticism. Study participants were invited, during Stage Two and Three focus groups and interviews, to discuss how well prepared they were at the start of their careers to undertake student assessment in schools. Responses included observations about knowledge of student assessment acquired during preservice teacher education programs at provincial universities.

It is important to note that study participants commented on educators' student assessment knowledge, as it relates to teacher education in Alberta. They based their comments on their personal experiences as undergraduate students and, also, as supervisors of student teachers, mentors of novice teachers, and as educational leaders responsible for staffing. Also, given the provincial focus of the Alberta Student Assessment Study, the perceptions of study participants are outlined below in relation to preservice teacher education in Alberta only. Although educators shared observations about preservice teacher education offered by universities in other parts of Canada and the United States, what follows pertains only to Alberta universities.

First, some study participants stated that graduates of Alberta's Bachelor of Education programs generally are "well informed about assessment" with some going as far as to reflect that recent graduates are much more aware of assessment than many of the more experienced teachers. However, others observed that graduates from one preservice program appeared to be "more aware of assessment for and of learning" than graduates of other teacher education programs. They also indicated that some university preservice teacher education programs are lagging in terms of the assessment knowledge and skills that are taught. The perception that one university is doing a particularly good job of preparing teachers with strong student assessment knowledge and skills, while others may not be doing as well, led to a call for more cohesion among the three major universities offering teacher education programs in Alberta so that "universities [can be] together on assessment practice." Further, educators noted the need to establish "curriculum subject areas and methodology classes on assessment" to ensure that teacher education students graduate with a sound foundation in these areas.

It was noted that students currently in elementary and secondary schools may be experiencing better assessment practices because of ongoing professional development in schools and districts. As a result, study participants suggested, graduating students may be concerned when they enroll in Alberta universities where outdated assessment practices still exist. For example, one teacher commented:

> *I worry that as we get better at doing these things at the secondary level I'm not sure the postsecondary level is keeping up. We do good assessment and are getting better. They [students] go to the university which is stuck with bell curves and multiple-choice exams.*

A lack of confidence with student assessment was common among early-career teachers. One thought that her lack of confidence was due to a lack of preparation about assessment and also from her teaching assignment at the junior high level when her preservice focus was at the elementary level:

> *I didn't feel overly prepared for assessment, specifically, from my university training, I had a good practicum teacher and he helped me a lot. [At university] I did not go through how to develop a rubric. They talk about why you would use them but not how to do them. I was elementary prepared and now I am teaching junior high but I have good partners here in the school.*

New teacher education graduates are perceived as more knowledgeable about student assessment than in the past. Specific comments related to an increased understanding of "assessment for and of learning." There were numerous positive comments about graduates from a specific university's teacher education program because of the perceived advantages the program presented, such as "hands-on practicum time." The desirability of this program was attributed to the overt teaching of assessment strategies, such as "rubrics and how to make them."

Consistent and strong concerns were raised about one Alberta university's teacher education program because graduates from this program were thought to be "inadequately prepare[d] … for assessment." Numerous classroom teachers, principals, and superintendents said that they are cautious about hiring or working with the graduates of this program because they are more likely to struggle due to their lack of knowledge and skills in assessment. The consensus was that study participants "liked the focus on reflective practice but [there was] no lesson planning or the technical part of it all." Graduates from this program themselves stated that there was a lack of "consistency across [instructional groups] and educational theory was lacking." Much preferred by educational leaders are "graduates from programs that have a hands-on practical focus."

Need for a practical focus. Virtually all teachers and administrators involved in the study advocated strongly for programs that were "more practice driven." They observed that in at least one provincial teacher education program there was "lot of talk of the philosophies of assessment but not the practicalities." A curriculum leader said there was a "technical void [among] student teachers I have had [from one teacher education program]." Another curriculum leader reflected that some "programs are more inquiry-based where student teachers are expected to figure it out themselves, whereas other programs are more directive where students come with a better foundation for teaching and student assessment, so the latter students are better prepared initially." A teacher reported that in her own preservice experience, "The most valuable aspect was the practicum. I would have rather had experience in schools rather than the theory. It was useless. I still use the practical stuff, [from] on the job training."

Acknowledging the value of educational theory, the consensus among participants in focus groups and interviews was that there was a real need for "more pragmatics in preservice … [particularly] on pragmatics of teaching and assessment." Two teachers related their feelings about their teacher preparation experiences and the need for a more practical focus:

> *...A little bit of mixed feelings, a lot of theory and strong emphasis on that. Good to have that background but when you came out you could have a little more preparation on the practicalities ... so we are not lost puppies in the school system, and a little more feedback from the professors or what would or would not work in the classroom. We could have used more concrete examples, coming up with a scenario and the topic and you come up with the exercise and activity, and then saying this is how you could mark it, and if you [the professors] could bring in the real examples, get students' stuff in there and look at how to mark it and get some ideas about how to mark it.*

Some preservice programs were criticized due to the overt emphasis on reflection without a balance of instruction about assessment or methodology: "Too much reflection, not enough instruction." One newly graduated teacher said, "When you look at the program, you have your case studies and field experience [but] there were no resources development or exposure so it was not until I was out that I found out about these aspects." Another teacher reflected on the new teachers emerging from the same preservice program:

> *The recent XXXX grads haven't got any idea of how to go about assessment and have no basis. They come and they don't know to teach reading. They have to have some idea of where they are going. It's all so general but student teachers really have to stretch. They come into the school and realize they know nothing about reading and math. ... There's no methods. Inquiry is important but you have to be able to watch a kid and see how they are doing. They need a one-year internship because they don't know. The XXXX students are so weak and are shocked when they come in. When they get into the school they also know they are not getting what they need in the XXXX program. Students know it and are very verbal about it when they are here.*

There were numerous reports about the need for explicit teaching in this preservice program:

> *A lot of case studies but no examples of rubrics or how to do them.*
> *Students were given cases and developed solutions so they were teaching the class rather than having someone with 20 years experience coming and saying this is what you could use.*

Another teacher, who graduated from one of the provincial preservice programs, noted that she learned "about rubrics, multiple choice, checklists but didn't learn about report cards or how to do formative and summative assessment."

Another important point that emerged from teachers' discussions of what needed to be included into preservice programs was that student teachers must understand the concept of shared responsibility in schools. This shared responsibility was for the work that every teacher did with students, regardless of the grade level, and for their contributions to each child's or adolescent's progress. Interview and focus group dialogue indicated that there was a "need for new teachers to understand they are contributing to the entire school program and the exams are not just about teachers in Grade 12."

Instructor and content preferences. Study participants concurred that practicum time in schools is crucial in the development of novice teachers' development of knowledge, expertise, and professionalism. One teacher commented that one provincial university's preservice program "was absolutely excellent. [It] focuses on practical application and experience rather than a theory focus. We did a brief theory and practice course, [and] came out with a good background on assessment."

The credibility of professors hinged not only on their knowledge, but also on whether or not they had actual teaching experience in schools. Professors who did not have any teaching experience were deemed to be far less credible that their counterparts with school-based experience. The research team heard that, "University instructors should have some teaching experience," and "The instructor had a lot of experience [in assessment practices]."

Another aspect which emerged from the discussions about preservice preparation was that the universities and their "professors should model good assessment in preservice programs." Participants observed that modelling was a powerful influence on the development of new teachers' knowledge of sound assessment processes. One university, which still uses a "bell curve," was criticized. Some new teachers indicated they rarely received feedback from their professors and "never heard the word 'rubric' used."

Teachers, both those in mainstream and alternative school programs, advocated strongly for student teachers to be taught about "alternative education, home schooling, outreach education" due to increasingly diverse school populations across the province. In addition, they emphasized the need for student teachers to understand the learning needs of students who have not experienced success in mainstream education and to be open to developing more effective instructional and assessment strategies. A senior high school student stated:

> *[Make] education relevant because education is one of the most fundamental [and] greatest things on the planet .... It is really a weird thing because everyone is different and there is too much pressure on kids in school today to decide what they are going to do with their lives.*

Educators, especially those responsible for teaching special education programs and those with highly diverse classes, also called for more overt teaching about how to teach children with special learning needs and to provide greater exposure to a range of teaching and assessment strategies that would enable teachers to meet the needs of all children in their classes. For example, a special education teacher recommended that preservice teachers learn how "to use alternative ways to assess. Definitely with special needs [students] you need that openness to assess in different ways." He also indicated that student teachers need to understand there is no one right way to teach, that openness and flexibility was essential in meeting the needs of a diverse classroom: "We can assess special needs students in ways that are suitable for them and if someone said you have to assess this child using this prescribed rubric this would not be helpful." Finally, study participants suggested that to meet the needs of the diverse classroom, "more psychology" was needed in preservice education.

Communication and Relationships

Perceptions about student assessment are closely related to the quality and quantity of opportunities to communicate and build relationships among educators, parents and students. In the ideal situation there is an effective working partnership between home and school, complete with numerous options to provide input, gather feedback, and ask questions. Good communication and collaborative relationships go a long way toward ensuring fair assessment practice and policy. Study findings in the area of communication and relationships consisted of six elements, including student voice, report cards, interviews, monitoring, celebrating, and miscommunication. The first component, student voice, is typically missing in most research reports, policy decisions, and discussions about student assessment and, as such, the current study is unique.

Student voice. Students from all levels of the educational community were enthusiastic and highly impressed by the fact that they were given the opportunity to contribute their thoughts and perceptions to the present study. For example, a senior high school student said that she and other students were "very pleased to have their voice recorded" and another senior high school student commented that he liked "being involved in the study." The following quotation from an alternative high school student mirrors these sentiments:

> *Even this survey is important because it should be what the students think about their education and [it is useful] to get their view on what is important as well.*

Other students expressed a strong desire to be treated with respect. As one senior high student put it, "I am almost 18 years old and I think teachers should talk to me because I am nearly an adult." Another high school student who stressed that he wanted "honest feedback, not euphemisms," held similar sentiments.

One student in an urban alternative high school noted, "The teachers know us. The mentors know us. You create a relationship with the teacher. We get to know them and joke around with them and they get to know who you are." A student in a rural alternative high school program echoed this point:

> *The teachers here talk to you. [They] make a plan for you and are really understanding, not like [regular high school] where they give deadlines and are rude and nagging instead of helping you.*

For educators, parents and students alike the report card is the main source of communication about how an individual student is progressing as a learner. This form of communication has been used in schools for decades and since most people, including educators and parents have been on the receiving end of report card feedback as former students, this tradition is held in high regard. As one elementary assistant principal noted, the "report card is still the primary form of communication." Report cards and their content likely will continue to be seen as a mainstay tradition in schools, although possible format options are being considered. For instance, an elementary assistant principal pointed out that his school was considering "moving to an electronic report card in the future." Also, a teacher from a high school provided insight into what such a system might entail and the possible benefits that this format offers:

> *What we do now is more effective and efficient for our students. They have constant access to their assessment records instead of the report cards that we used to send home....XXX is our marks system that allows student information to go in there, their schedules, timetables, attendance, and grade books. At any time students and parents have Internet access and their access codes. I can go onto XXX and pull up attendance records. This system allows me to work around my schedule and be effective. Students are accountable for monitoring their own assessment. It's almost eliminated the report card stress. We are expected to hand out a printed handout at least once a semester but I choose to print once-a-month reports that we then talk about. It's up to us to step up and be professional .... Principals can go online and see who has marks prepared. It's a big brother system and a positive one. The only challenge is training the parents to use the Internet. The kids know but [we need to] train parents that they can check that out. Before it was our privied [privileged] information.*

Study participants from different schools and districts reported various approaches to report card dissemination. In some instances, there is a move to district-wide report cards, whereas schools in some districts have the option of designing their own report cards. As for frequency, one senior high teacher talked about six reports a year going home to parents and students, whereas an elementary teacher described an annual system of three report cards and three interim report cards. Younger students reported that "parents like the interim report for improvement" and that "interim reports told me to pull up my socks."

Qualitative results from interviews revealed that students and parents held some critical views about report cards. One parent felt that report cards were not clear and lacking in detail, and elementary students alleged, "report cards were too general" and said that they preferred a percentage as opposed to word descriptors such as "excellent." One senior high student expressed his "dislike of standard comments on the report card" and, likewise, one elementary student thought report cards "should have separate comments for different students, maybe handwritten." Standard comments, it would appear, have a down side, as one elementary grade student reported "the teacher had put in comments from other students on our report so some of the comments were wrong." The following quotation by a parent underscores some of these critical perceptions:

> *I'm not finding that I'm clear about them [report cards]. They are not giving me as a parent as much information as I'd like. It's a one-to-four scale. We moved from a three-point scale to percentages to assessment changes and report card changes [one-to-four scale]. ... My son was disappointed. He likes the numbers, the percent.*

Elementary assistant principals were aware of parents' preferences for percentages or letter grades on report cards. They were adamant that "everyone needs to know what they need to do to be successful" and were also confident that "the language of assessment is now commonly understood." Senior high teachers were very similar to elementary assistant principals in their perceptions concerning report card clarity and as one teacher stated "we try to use a language that our students understand and now we see that students are using the same terminology around assessment." In contrast, one elementary teacher felt that "report cards use curricular language and objectives that are teacher oriented, not student or parent oriented."

Other elementary teachers asserted, somewhat pessimistically, that "actual learning areas are not being reported on report cards," and that "report cards don't provide sufficient feedback across the curriculum to students and parents." One teacher divulged that he was "struggling with anecdotal record overload." Agreement with these kinds of concerns is detailed in the following quotation:

> *In this school, in elementary, we only report or comment on LA, math, and religion, and I asked the question, "Why then do we do science, physical education, social studies as well as the others? Why don't we comment on all of them?" Well it is too much work. The parents don't know anything different and would not know but if they went to another school they would be surprised.*

In an attempt to ensure report card clarity another elementary teacher sent report cards home with the curriculum objectives attached.

Despite some criticism of report cards, survey data affirm that perceptions are mostly positive as indicated by responses to the item *Report cards being easy to understand.* Table 39 indicates 83.4% educators, 93.2% elementary students, and 92.3% parents agreed or strongly agreed to the item. Perceptions on whether *Students should be told how their work compares with other students* however, are clearly less positive as shown in Table 39. Only 39.7% of educators, 38.3% secondary and 56.5% elementary students, and 54.7% of parent agreed or strongly agreed. Interestingly, 83.0% educators also agreed and strongly agreed with the survey item, *Students should be told how their work compares with standards of achievement.*

Table 39
Communication and Relationships

Item	Educator			Student [20]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Parents receive sufficient information about their children's progress from teachers.	87.6%	11.9%	0.5%	80.0%(SS) 96.0%(ES)	13.7%(SS) 4.0%(ES)	6.4%(SS)	83.8%	15.6%	0.6%
Students should be told how their work compares with standards of achievement.	83.0%	13.4%	3.6%	38.3% SS)	53.8 (SS)	7.9%(SS)			
Students should be told how their work compares with other students.	39.7%	55.7%	4.6%	56.5% ES)	43.5%(ES)		54.7%	40.7%	4.6%
Report cards are easy to understand.	83.4%	15.0%	1.6%	93.2%(ES)	6.8%(ES)		92.3%	7.1%	0.6%
Individual student achievement is recognized adequately in schools.	70.1%	22.2%	7.7%	60.0%	24.6%	15.3%	66.3%	20.7%	13.0%
Teachers regularly discuss with students ways of improving their grades.	95.3%	4.1%	0.5%						
Teachers regularly discuss with individual students ways of improving their achievement.							64.6%	23.4%	12.0%
School staff facilitate parent understanding of student assessment.	81.3%	14.6%	4.2%	52.1%	32.1%	15.9%	67.3%	23.8%	8.9%
Students' emotional development is reported by teachers.	54.9%	37.8%	7.3%				40.3%	43.3%	16.5%
Students' emotional development is assessed.							46.7%	38.7%	14.6%

Note: Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

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[20] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

Interviews. The second most reported type of communication was the interview, and typically these were formally scheduled immediately following the dissemination of report cards. Qualitative data revealed a highly positive response to interviews. Parents expressed an appreciation for "the willingness by teachers to talk to parents" and one parent thought it was "very important for teachers to put a face with the students." Two different parents remarked upon the need to have both parents attend the interview as a form of support as well as a reflection of the importance of such meetings.

One elementary principal described a critical change in her school, an "interview process where grades are not discussed and [it] has been more successful in focusing on learning." Whether interviews are more traditional or contemporary, a senior high school teacher observed that approximately "75% of interviews [are] with just parents, [while the other] 25% are with both parents and students." An elementary student disclosed that, "My parents never come to interviews because they have jobs and they are working."

Monitoring. The most important function of school-home communication about student assessment is to inform parents and students about individual student progress and achievement. More specifically, communication is pivotal in helping parents and students monitor students' understanding and knowledge of the curriculum objectives and in conveying the student's capacity to demonstrate that learning through their grades, assignments, classroom activities, achievement, and numerous other means. Regular communication ensures that parents and students can monitor how students are doing with respect to grade level expectations and how individuals compare with other students in the class and subject area. Accordingly, one parent in this study conveyed her belief that "parents want to know early if the child is not doing well [so] don't leave it to the interview." A parent of a junior high student described monitoring in the following way:

> *[It is] harder now that [my] son is in junior high. More teachers, more going on. First report card and he didn't do as well as expected. I have to be more involved because if I don't he'll fall behind. He was used to things being done for him in elementary but not now.*

Elementary assistant principals were very clear about the multiple purposes of monitoring, and some of the purposes are parallel to those expressed previously by parents. One assistant principal, for example, voiced her contention that "parents really want to know how their children are doing." In addition, elementary assistant principals talked about how feedback "is getting more specific and accurate" and how they are "being more clear about outcomes and goals and how we measure those." In regard to assessment specifically, one assistant principal declared, "Results are easily shared and understood by students, parents, and teachers."

Qualitative data indicate that both parents and teachers value and rely upon communication strategies that relate to the day-to-day and month-to-month progress of students. A variety of traditional approaches were noted. For example, teachers reported having an agenda book that parents need to sign and, also, to other forms of communication including telephone calls, notes, report cards, and interim reports. For elementary assistant principals, in particular, telephone communication for the purpose of monitoring students appeared to be a common strategy. Collectively they noted that "the secretary phones if a student is absent" and that a telephone call typically was made to a student's home if homework was not completed. Parents, it was reported, often will initiate communication by telephoning the assistant principal directly.

An elementary teacher commented on the importance placed on "constant communication with parents." Specific concerns around monitoring achievement were suggested by secondary administrators. A senior high assistant principal commented that "traditionally a student's grade was a surprise revealed two or three times a year" and a senior high principal offered that his colleagues are "challenged by communicating the changes to assessment." Similarly, one elementary teacher declared that she didn't "think parents are involved in the assessment process enough."

Survey results indicate that all participant groups generally are satisfied with feedback on student progress. As indicated in Table 39, 87.6% of educators, 80.0% of secondary students, a resounding 96.0% of elementary students, and 83.8% of parents were in agreement or strong agreement with the statement *Parents receive sufficient information about their children's progress from teachers.* Also positive but not to the same degree, responses to the item *Individual student achievement is recognized adequately in schools,* revealed 70.1% of educators, 60.0% of secondary students, and 66.3% of parents were in agreement or strong agreement.

Efforts to avoid breakdowns in monitoring student progress were described. A secondary teacher observed that it was part of the regular week at an alternative high school to review individual student progress. Specifically, he stated:

> *Individually we talk about all our students every Friday at a Student Needs Meeting. So if our students are doing poorly, failing a lot of tests, not handing is work, then we flag them. We have meetings [with] students, principal, and parents [so] everyone knows what they need to do to be successful here.*

Further to this, a secondary assistant principal volunteered that "teachers are responsible for all the students so information about individual students must be shared with other educators associated with the student." An assistant principal of a K–9 school articulated his perception of how best to monitor student progress:

> *Being clear about what your outcomes and goals are, you can develop assessment practices that will measure those. Results are easily shared and understood by students, parents and teachers .... It has taken time for parents to buy in. They are used to seeing a percent or a letter grade indicating how a child is performing and very often they would compare to their other children or peers so it took time for them to appreciate what is a different system. We no longer give one whole score, instead it is specific outcomes.*

Qualitative data supported new approaches to monitoring student progress through, for example, online communication. Senior high school teachers volunteered several points in this regard, ranging from a declaration that "course marks are available online" to "parents can go on to XXX, our online system, and pull up student marks with no surprises." Another teacher asserted, "Communication with teachers and parents through email has been essential for the shift we have been making" and, in direct agreement, one other teacher said, "Before it was privileged information." Accordingly, one secondary high school assistant principal pointed out, "With technology we can change the level and amount of students' feedback." A senior high student similarly declared, "Students and parents want access to the website. They need to be current." Senior high student focus group participants were keen about using online systems to convey student progress:

> *It is also good when they put up marks on XXX straight away so you can check on your progress right away .... Some teachers are really good at marking stuff and getting it onto XXX but some don't do it all or just before report cards. ... It is not supposed to be optional to use it but not all teachers do. ... We use XXX to monitor our own progress*

Not as many comments were received from elementary school participants, but sentiments were similar to those expressed by their senior high colleagues. An elementary teacher talked about how the school website was "used to contact and inform parents" and elementary assistant principals voiced that parents were connecting online and making use of the "homework hotline," and that an online portfolio that is on *Facebook* has been set up for each student. It is of interest to note, however, that not all teachers are ready to use online forms of monitoring. One elementary teacher was not a fan of email and indicated, "I don't really think of email as communication. Email is good for information and absences, etc." and another remarked, "I don't use the district server for posting homework. I'm here all the time so parents can contact me." Another form of communication and monitoring is associated with the celebration of student success as described in the following section.

Celebrating. Celebrations of student achievement and outstanding performance have been a longstanding tradition in the majority of Alberta schools. Traditional forms of celebration include awards, honour roles, and special ceremonies. Interview and focus group comments from parents, students, and administrators indicate that many of these traditional celebrations continue to be valued and they still are carried out routinely. A junior high administrator, for example, indicated that her school used an honours board and an effort to recognize student performance and a parent concurred by declaring she liked previous awards, honour role and the principal's role in maintaining these activities. Another parent asserted, "Kids want to know where they are good. It's part of building confidence. Assessment, the way it is done now, doesn't do that at all."

However, some dissatisfaction emerged with the effects of traditional celebrations and there were indications that new forms of celebration are being practiced. As one school administrator suggested, "It's much more today than just celebrating the traditional honour role." Collective comments suggest that new forms of student celebration are moving to the classroom level and that recognition is given for a greater variety of achievements including student effort and improvement. One elementary level assistant principal described this new direction as "within classroom celebration of learning" and, implicit with this, is the possibility for students who will never be on an honour role to be recognized for their efforts.

Miscommunication. Sometimes the monitoring of student progress can be perceived as going awry. Interview data revealed several instances of this happening, for students and parents especially. Students expressed their frustration with a number of school practices. An elementary student remarked there was an "unclear connection between assignments and report card marks" and another complained it is "not always fair because the teacher said I was doing good and I got a C." Elementary students also expressed a dislike of certain monitoring routines to which they were subjected. One student stated he "hates how the teachers scare you with the discipline sheets and say they will dock marks on your report card" and another talked about the school agenda going home and consequences for not returning it; "If you don't bring it back you are docked marks: 1 is a warning, 2 is a 10-minute time out, 3 is a 20-minute time out, 4 is a half day, and 5 is you go to the office and there is a phone call to your parents." Approximately 70% of elementary students agreed that report card marks change because of good/naughty behavior (see Table 41).

Senior high students conveyed similar concerns. As one student commented, "Teachers don't phone home unless it is bad news" and another felt that "reputation follows the student regardless of ongoing behavior." Indeed, phone calls home were often viewed negatively as one parent maintained, "All I hear is negative about my child and that makes me feel negative about the teacher." Another senior high student complained, "Any contact that the school makes with your parents is negative. There is no positive." A senior high teacher declared, "Parents won't answer the phone when a teacher calls. If the teacher leaves a positive message, [then] parents phone right back. They are tired of hearing negatives about their child." These qualitative data reinforced the survey item in which nearly 81% of secondary students agreed that behavior in class affects the grades they get (see Table 40).

Specific points were made concerning miscommunications and achievement. One senior high assistant principal asserted, "Parents need to be aware of new directions in assessment that are emerging." However, misunderstandings can occur. For example, a senior high school teacher remarked, "Parents frequently try to take the point system and put a percent to it and that's difficult because those points or numbers don't relate to percentage and they don't understand that." An elementary assistant principal volunteered, "It's also a change in thinking for parents who reflect on what was done when they were in school. Older kids also are having a tough time about not getting percentages." As one parent who had heard other parents convey negative sentiments about the Grade 3, 6, and 9 Provincial Achievement Tests (PATs) commented, "How do we communicate to parents that PATs are not a big deal?" Students also expressed their qualms. For example, one senior high student was unhappy about missed opportunities for assessment feedback. He stated, "Students and parents don't challenge the policy of not returning tests."

Survey data mirror the perceptions voiced above. As shown in Table 39, responses to the item *School staff facilitate parent understanding of student assessment* were mixed with educators indicating more positive views—81.3% agreed or strongly agreed with the statement—whereas 67.3% of parents agreed, and only 52.1% of students agreed. Similarly, educator responses to the item *Teachers regularly discuss with students ways of improving their grades* had 95.3% of educators indicating agreement or strong agreement whereas parent response to a similar survey item *Teachers regularly discuss with individual students ways of improving their achievement* resulted in only 64.6% agreement.

In short, quantitative survey results suggest that all participant groups believe parents receive adequate information about their children's progress from teachers and that report cards are easily understood. Different perceptions were evident for educators, who are more positive, and parents on whether teachers regularly discussed with students ways of improving student grades and achievement. Qualitative data generally mirror quantitative findings, and affirm that report cards and interviews continue to be the primary means for home/school communication. Additionally, the findings lend insight into new forms of monitoring student progress and communicating assessment results, particularly online methods. Some school practices are associated with celebrating student performance and, despite all efforts, indications of miscommunication were noted. These findings suggest that communication and monitoring are essential practices for establishing optimal home-school relationships, and that there is reason to review and perhaps revise some current practices in schools.

Part of the miscommunication theme that emerged in the study was the finding that the executive of the provincial teachers' association has a formal policy of excluding Alberta Education personnel from providing professional development sessions about achievement tests, some aspects of the diploma examinations, and the Accountability Pillar at teachers' conventions and specialist council events. The exclusion of Alberta Education personnel actively impedes open and transparent professional debate among all educators and silences the voices of legitimate stakeholders.

Further, the nature of public dialogue among educational stakeholders establishes the tone of relationships. When emotive terminology is used, such as the description, reported by three study participants, of provincial assessment practices as "professionally abhorrent" and the description of government accountability policies in terms of "collateral damage" (Couture, 2009), opportunities for constructive dialogue are reduced and stakeholders become reluctant to voice diverse opinions. Similarly, use of terms such as "real learning first" (Alberta Teachers' Association, 2008) may discourage the articulation of other perspectives and, in fact, imply that other perspectives are somehow "not real."

Fairness and Equity

School assessment policies and practices can have detrimental consequences within the educational system, and although any undue hardship is fully unintended, some students who typically are struggling to fit into existing structures may experience challenges that need to be addressed. The quantitative and qualitative data associated with classroom assessment and children with special needs led to this section titled Fairness and Equity which is presented in three parts: fairness and discrimination, challenging policy and practice, and transforming schools and classrooms. The first section, fairness and discrimination, presents findings indicating that there are several cultural, home and school factors that may warrant a major transformation within our educational systems.

Fairness and discrimination. No one would deny that all students should have the right to an education that is appropriate to their learning needs. Both the quantitative and qualitative data gathered during this study indicate that there are issues associated with student assessment that may undermine fair and equitable practice, particularly for those students who are coded as having exceptional learning needs, children who come from cultural minority backgrounds, children who come from low socio-economic or at-risk home environments, and other students who may not fit within the general school mainstream.

Although both quantitative and qualitative data were collected on perceived need for adjustments in assessment to reflect gender differences from all participant groups, it was generally apparent that no such adjustment was deemed necessary. For example, the survey data summarized in Table 40 include responses to the item *Student' gender affects the grades they get*, and the summary of responses in Table 41 to the item *Adjust grades based on student gender,* indicate that educators, parents and students were in strong agreement that no effects for gender were perceived. However, qualitative data suggest that frequently gender was linked with behavior in that boys were perceived to be more likely to be disruptive and less compliant, which in turn influenced the grades that teachers assigned to boys. The linkage between gender and behavior was reinforced by the item in Table 40 in which 80.6% of students reported that behavior in class affects student grades.

For all other areas however, it seems apparent that the way that current school assessment practices are configured, educators, parents, and students alike have strong perceptions that change and even major transformation of current practices are in order.

Table 40

Fairness and Equity and Student Assessment Considerations

Item	Educator			Student [21]			Parent		
	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK	% SA/A	% D/SD	% DK
Fairness and Equity									
Students' cultural background affects the grades they get.	59.0%	30.8%	10.3%	19.7%	65.2%	15.1%	32.5%	49.4%	18.0%
Students with special needs should have access to accommodations/adaptations for assessments.	94.8%	2.6%	2.6%				74.9%	4.1%	21.0%
Students with special needs should have access to the help they need to do tests.				78.0%	9.3%	12.7%			
Students with special learning needs get the help they need when writing Alberta Education examinations.				44.4%	9.3%	46.2%			
Students' gender affects the grades they get.	23.2%	70.1%	6.7%	16.0% (SS) 12.7 (ES)	77.1% (SS) 87.3% (ES)	6.9%	18.8%	71.3%	9.9%
Students' behavior in class affects the grades they get.				80.6%	15.0%	4.4%			
Schools do a good job of assessing gifted students' learning.	52.8%	29.0%	18.1%	49.2%	20.0%	30.8%	28.8%	12.8%	58.3%
Schools accurately assess students whose first language is not English/French.	27.7%	45.6%	26.7%	40.1%	16.3%	43.6%	25.2%	13.7%	61.1%
Teachers change assessments for students with special needs.	87.4%	6.8%	5.8%	52.3% (SS) 73.7% (ES)	10.1% (SS) 26.3% (ES)	37.6%	37.8%	9.5%	52.7%
How teachers change assessments for students with special needs is satisfactory.							28.3%	9.4%	62.2%

Note: Data for the items were clustered according to positive, negative, and don't know. Percents were calculated using the total number of responses for each item. SA/A = Strongly Agree/Agree, D/SD = Disagree/Strongly Disagree, DK = Don't Know

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[21] Unless noted, responses are from secondary students (SS) in grades 7 through 12. When responses to an individual item are available from elementary students (ES) in grades 4 through 6 and from secondary students then that is noted in the table.

The qualitative data indicate that there are mixed expectations with respect to children with special needs. There was the perception that expectations for special needs students were too low in general, and that students who were gifted were not sufficiently challenged. Quantitative survey responses affirm this latter perception. In response to the item *Schools do a good job of assessing gifted students,* only 52.8% of teachers, 49.2% of students, and 25.2% of parents responded that they agreed or strongly agreed. A parent participant expressed her frustration with having to fight to get her child coded in order for him to receive the extra support. A principal of a low socio-economic community school further expressed another element of frustration:

> *Is not that the teachers and parents didn't care about their students; it's such an uneven playing field. I'm ashamed of a society that victimizes its least capable, and I'm ashamed to have to participate in that, I'm ashamed that, in a province where people are as well educated as they are, we can't find other ways and we still participate in this [testing]. It's a sound byte, the quick fix and that's what people relate to.*

Cultural diversity within the school population was seen to be enriching and a challenge. Younger students expressed their very positive impressions of liking the experience of studying alongside students from a variety of cultures and learning to respect one another in their school. However, elementary teachers were concerned that assessment practices do not take into account student culture and, therefore, it was felt that they might not have an accurate picture of what students with cultural differences really could do. In agreement, another elementary teacher stated that, "ESL students deserve the fairness that everyone else has." Another elementary teacher saw a lack of understanding concerning aboriginal students' awareness of the relationship between attendance and achievement as a significant cultural factor and concern. Other issues relating to First Nations students were expressed by an assistant high school principal:

> *[I] don't think they are [being assessed fairly]. They have a very different culture and, how they have been socialized with a very different style of learning, they may be very bright but it may not show up in traditional methods of assessment. It's why they are dropping out.*

It is of interest to note that almost 60% of educators perceived that students' cultural background affected the grades these students got, even though this was not a strong perception for students and parents as indicated in Table 40.

Home factors were cited as important influences on student assessment and achievement, and several senior high teachers expressed particular concerns. For example, it was noted that, for many of the students who were attending alternative high schools, the home situation was often considered to be dysfunctional. As one teacher stated "They are not all throwaway kids but families have thrown them away." One teacher noted that approximately 1/8 of her students have children themselves and have a history of difficult living conditions. Another teacher reported that students in an alternative school may be living with parents who were struggling with many issues as well and were, therefore, not able to provide support for their children.

In addition to cultural and home factors, there are numerous school factors that point to a need for some sort of transformation in current systems and practices, and concerns are directed toward several areas of student exceptionality. For example, an elementary teacher felt that the progress of special needs students was not reported accurately. In a similar vein, a senior high school student perceived that he could try his hardest but never would get an "excellent." Another issue raised by an elementary vice principal is the occurrence of late diagnosis of students who have learning problems. An elementary principal expressed concerns about having coded students writing the PATs because it would make the school look bad. One younger student, speaking from actual experience, talked about his concern for the "smart kids" who get low gym marks and then cannot get on the school's honour roll. A parent also expressed a concern there was limited support for gifted children in general. A senior high school teacher stated that, "WASP attitudes need bridging and new teachers are more likely to do this." Perhaps the comment from an alternative high school teacher summarized best the challenges faced by students with special learning need when he said, "They are square pegs in round holes when they are in the regular school." In a similar vein another senior high student said:

> *The sad part in a school like this is that it is a microcosm of students who are student refugees who slipped through the cracks. You have to want to be in a place like this. You can't force students to be here and that is the worst thing to force a student to come to school.*

Table 41
Fairness and Equity and Assessment Practices

Item	**Educator**			**Secondary Student (Grades 7 through 12)**			**Elementary Student (Grades 4 through 6)**		
How often is each assessment tool or practice used?	**% A/O**	**% R/N**	**% DK**	**% A/O**	**% R/N**	**% DK**	**% A/S**	**% N**	**% DK**
Penalties for late assignments	32.6%	66.3%	1.1%	77.3%	18.8%	3.9%			
Report card marks change because of late assignments							87.1%	6.2%	6.7%
Modify grades based on other teachers' perceptions of students	6.9%	90.4%	2.7%	26.7%	58.2%	15.0%			
Alter assessments for students with special needs	71.2%	20.4%	8.4%	42.1%	13.8%	44.1%			
Assign grades on a bell curve	1.6%	91.1%	7.3%	13.5%	31.7%	54.8%			
Align with grade distributions of other teachers	16.4%	79.4%	4.2%						
Adjust grades to recognize student behaviour	17.4%	78.9%	3.7%	46.5%	36.2%	17.4%			
Report card marks change because of good/naughty behaviour							69.9%	18.1%	12.0%
Adjust grades to recognize neatness	10.5%	85.8%	3.7%	31.4%	51.2%	17.4%			
Report card marks change because of how neat you do you work							68.7%	15.4%	15.9%
Adjust grades based on student gender	1.6%	95.8%	2.6%						
Adjust grades based on attendance	5.8%	92.7%	1.6%						
Bonus marks for extra work	35.1%	62.3%	2.6%	47.9%	44.5%	7.6%			
Extra credit for volunteering in community				21.6%	55.4%	23.0%			

Note: *Data for the items were clustered as "Always/Often," "Rarely/Never," "Don't Know," and "Never," and "Don't Know."*
Percents were calculated using the total number of responses for each item.
A/O = Always/Often, R/N = Rarely/Never, DK = Don't Know, A/S = Always/Sometimes, N = Never

The fact that certain students within a school are often seen as different and consequently are considered to be socially or academically unacceptable is a stigma that many students experience. The qualitative data from both teachers and students affirm this reality as it relates to student assessment practices. The following elementary school teacher quotation is a good example:

> *The stigma that goes with being a coded kid and some react negatively to it. The teachers have so many students to worry about that she can't get to their emotional issues. They don't always understand why they are there and why they can't be with the regular kids and why do I have to do this. The other thing that has bothered me for years was the fact that teachers talk about these kids from grade level to grade level even if they are doing better. Because of their history, their reputation goes along with them so the kid really has a hard time. ... Maybe the coding has to be looked at more frequently, because you can see in resource a kid that is supposed to be a level of coding and I am surprised by it and I wonder when was this done and has it changed.*

Senior high teachers for example indicated that there was a stigma associated with being coded and that "teachers talking in the staff room make it difficult for students to improve." Another senior teacher stated, "Students with special needs don't necessarily get the support because they should not be in this school."

Younger students claimed that students get a little jealous of those students who get extra help and, as one student expressed it, "She doesn't have to do the tests. She works with someone who comes to the school and it's really not fair." Another young student mentioned "kids who don't finish their *Mad Minutes* (worksheets) are made fun of by other students who call them slow or stupid or not as smart."

Senior high students reported similar instances. For example, one student indicated that some forms of streaming such as the Advanced Placement program were seen to foster a form of elitism. Another student reasoned that "teachers should teach and not discriminate or make you feel that you can't do anything right." Another example was offered by a senior high student who said, "One teacher didn't want a student to write the final exam but other teachers intervened so the student could."

Elementary students also talked about the issue of boys and the consequences of their behaviors. One student remarked, "Boys shouldn't be marked down if they misbehave or are being rude." Another stated that, "Boys talk more and their behaviour is their mark." As indicated on Table 41, approximately 70% of elementary students agreed or strongly agreed that *Report card marks change because of good/naughty behaviour.* Survey responses for the item *Students' behaviour in class affects the grades they get* (Table 40) indicated that the majority (80.6%) of secondary students agreed or strongly agreed. An elementary teacher added some support to these perceptions by noting that "assessment can be used for behavioural control, whether intentional or not." Another comment from an elementary teacher directed at males indicated they are "penalized because of printing

(not good) and he should be allowed to use a computer." A final comment from an elementary student conveys the belief that "girls get higher marks."
Perceptions of senior high students about teacher responses to some students are somewhat negative. One student remarked that, "If they don't like you, they mark you more harshly," and another said, "Student status or physical appearance affects treatment."

Challenging policy and practice. Secondary principals were not very positive about teacher knowledge and practice in matters of fairness and equity and assessment. One respondent felt that the accuracy of special needs assessment was questionable in general. Another indicated the perception that ESL issues were considerable and that there was a perceived need to improve teacher knowledge and practice in the area. Similarly another teacher noted that there is "not a great deal of understanding of cultural diversity."

Elementary school teachers were more positive in their perceptions. One teacher indicated that she didn't give initial consideration for culture, race, or gender in her teaching and assessment practice, but that this was beginning to be an area of focus in her present day practice. Another elementary level teacher thought that the more recent graduates from teacher preparation programs have a better focus on the unique needs of students who are coded or who have exceptional learning needs. Quantitative findings support the qualitative data, as shown in Table 40, in that only 27.7% of educators perceived that *Schools accurately assess students whose first language is not English/French.* On this same item, parent responses were similar to teachers with 25.2% agreement or strong agreement, although students were more optimistic with a 40.1% agreement.

Students in senior high schools and elementary teachers who were interviewed also commented on how some parents are challenging current assessment policy and practice. The point was made that it was a good thing that the option of challenging some courses was available. However, the student further indicated, "The amount of effort it takes to challenge the system is ridiculous." Another senior high student made the point that "not all parents have the time and resources to navigate the system." Comments from elementary teachers suggest that, in some instances, the school had to "wait two years for students to be psych tested" and that some parents decide to use their own funds and make arrangements for private assessments to avoid the wait.

Members of the alternative high schools had some very positive comments to make about the features of their schools that were appreciated the most:

> *The grading is fair… but how you are marked is different. They have taken more thought into the grade, like how you have grasped the topic [and effort]…. I spent 18 hours on one piece I had made.* (Student)
> *Humanity is not a number and neither is a student. We are all human beings and we are all different.* (Student)
> *Compared to other schools we do an excellent job because we try to personalize it. Detailed, use a lot of comments because students are coded and have individual*

> *program plans (IPPs), so lots of comments from our learning resource teacher. Most teachers here do 30–40 report cards at most, compared to other high schools where they do 150 report cards, so we have more time to make our comments. So we do a good job of communication around assessment and what needs to be done, and [make sure that] parents know how their child is doing. We have six reports go out in a year. Students and teachers are invited to follow-up interviews. Seventy-five percent [of interviews] are [with] just the parent and twenty-five percent are with both parents and students. We are unique. Most comments we hear from parents are "Our child has never done this well in school." In our school we have to make adaptations. Some students aren't the best writers so we have to adapt to what they can do. Our students come to this school because they are damaged in some way. That's why they come here, because they weren't doing well in their other schools.* (Teacher)

Comments from a parent and an elementary student indicate that a magnet school was similarly positively viewed. The parent stated that, "students repeatedly said they love the [magnet school] because they learn differently and have lots of auditions and various other assessments." Positive comments were echoed by the student who stated that the "[magnet school] had genuine appreciation for achievement and different learning styles and appreciation for diversity."

Broad-based whole school transformation requires substantial effort and resources to put into effect, and such transition processes may be impossible or untenable for many operating schools. Nevertheless there are many minor changes and adjustments that could be readily implemented within most schools and these changes would have a significant impact on the learning success and achievement of children who are experiencing challenges. For example, teachers and students had numerous points to make concerning the modification of assessment for children with special needs. The following comment from an elementary teacher gives a good indication of the kinds of modifications that are constantly being considered and implemented.

> *If the assessment is not specialized for them it just pushes them lower and lower. It is the distractions of dead silence or too much noise so they must have their needs met. So you need to know who they are and what their needs are so that I can assess them on a daily basis. It is almost impossible to give everyone a perfect environment for regular assessment. I try to pair them up with others who will work to their strengths and not accentuate their weakness. Lots of team work and especially those who struggle with their literacy skills which makes it easier for me as I can spread myself more easily and students can help each other to give assistance to their peers to read and understand.*

High school students recognized that students with special needs are not graded on the same tests, and it was generally accepted that "if students need accommodations to pass, then let them pass." As one senior high student expressed it, "Someone with Down Syndrome should not be graded at the same level we should." In accord, a senior high teacher commented that assignments should be modified so students can be successful.

One elementary teacher suggested that for students with language barriers, modifications made for children with learning disabilities might be appropriate. On the positive side, a senior high teacher advocated for multiple chances by stating "if students are willing to keep working, there are endless opportunities to succeed." Similarly, another senior high teacher felt that alternative high school students do best when they experience continuous assessment. A parent participant voiced agreement with other participant groups by saying, "Those on IPPs can be assessed differently and that's fair."

It is of interest to note that quantitative findings on the matter of assessment modification (see Table 40) reveal that teachers show high levels of agreement (94.8% agreed or strongly agreed) that students with special needs should have access to accommodations/adaptations for assessments. Parents are slightly more cautious in their rankings on the matter (74.9% agreed or strongly agreed) and on a similarly worded survey item on Table 40, *Students with special needs should have access to the help they needs to do tests,* 78% of the students were in strong agreement or agreement with the statement. However, on the item *Students with special learning needs get the help they need when writing Alberta Education examinations* students were less positive with only 44.4% showing agreement of strong agreement. In a similar vein, the perceptions that teachers do change assessments for students with special needs was strongest for educators at 87.4%, 73.7 % for elementary students, 52.3% for secondary students, and only 37.8% of parents agreed or strongly agreed. On a related item, *How teachers change assessments for students with special needs is satisfactory,* only 28.3% of parents were in agreement or strong agreement. These statistics convey some lack of confidence about whether and how assessments are modified for children with special needs. However, high percentages of parents who indicated, "don't know" (52.7% and 62.2% respectively) on these two survey items also suggest that many parents simply may have no experience or information on the matter. Inspection of the survey responses on an item pertaining to how often assessments were altered for students with special needs (see Table 39) showed that educators were more optimistic with 71.2% indicating "always" or "often," whereas secondary students responded more cautiously, much like their parents, with only 42.1% indicating "always" or "often."

Assistive technology and the opportunities this could offer toward assessment modification were captured in some of the participant quotations. A senior high school teacher asserted that online learning should have an auditory component for students with reading difficulties. Similarly, an elementary teacher indicated "technology can assist by reading tests to students." This approach to assessment modification for ESL students was described by another elementary level teacher:

> *We have a lot of ESL kids so anything that does not require a lot of reading is good. ... I can type up a test and scan it and then the computer reads it back to them. There are a few that feel they are being singled out and they say they just want to do the written test but then you end up reading it to them and it is very time consuming.*

In light of the many challenges associated with ESL student assessment, an elementary assistant principal suggested that we "consider assessing ESL students in their home language." Further to this, another elementary school assistant principal advised, "second language learners need to be assessed individually."

Some of the participant comments were directed toward modifications based on auditory adaptation. Elementary teachers indicated that they make modifications by having a teacher assistant read aloud and by modifying testing, and another mentioned that parent volunteers were able to read aloud to students on exams, but it was also noted that setting this up was difficult at times. A senior high teacher reported that "teachers read the questions" for students on some exams. In a slightly different approach, an elementary student noted, "Our teacher made us explain our answers verbally and not in a test that made you memorize."

One younger student indicated, "I worked on the PATs in the principal's office because I needed a quiet place to work." Another elementary student volunteered that he needed "more time on PATs and it's very hard when you have pressure." A middle school student who stated expressed similar concerns: "Another thing. If we had more time for the kids who can't write because they are slow and they need more time."

Another area that pertains to assessment modification practice is the use of auxiliary help in the classroom. One elementary teacher commented, "We constantly modify the program with aide support, typing notes for coded kids." Another elementary teacher mentioned that the "resource teacher uses a variety of informal and formal assessment tools."

A final area of consideration emerging from the qualitative data regarding assessment transformation is the important fact that students want to be treated with respect and sensitivity, especially if they are experiencing difficulties that require modifications. For one middle school student this meant, "They don't challenge the gifted kids in this school. They do a little but not much. I spend time in the library playing computer games because I have finished my work rather than doing extra stuff. I would prefer to have additional work because I am wasting time and [I] am bored." An elementary student voiced a concern that "students don't like to be seen as having assistants on tests." For one student, as the following quotation reveals, getting the teacher to accommodate in individually preferred ways can be a struggle:

> *I hate it when teachers take you to the library and read the test to you and I ask that I don't want the teacher to do that and they get mad at you and I say, "I don't want your help today" and then you get a [warning] sheet for being smart [rude].*

A good starting point may be as simple as getting to know students, as one senior high teacher suggested, "You need to know what is going on first in their lives before addressing the school content."

To summarize this section on *Fairness and Equity*, quantitative findings reveal that teachers are more positive than parents and students in their perception that students with special needs should have access to accommodations/adaptations for assessments, and that teachers should and do modify assessments. There is strong perception of parents and students that student behaviour affects grades and report card marks, whereas gender does not appear to be a concern associated with student assessment. The quantitative data pertaining to students with minority cultural backgrounds, giftedness, and students whose first language is not English/French suggest that assessment policies and practices may need to be reviewed and changed. Qualitative data revealed that a combination of low expectations and certain cultural, home, and school factors contribute to widespread perceptions of stigma for students who are challenged by typical assessments practices. It appears that some type of transformation may be required to ensure that all students have improved opportunities to demonstrate their learning and that schools make adjustments and modifications to ensure accurate assessment of student learning.

Politics of Assessment

Study participants provided ample evidence in Stage Three of the study of the politics associated with student assessment. This is perhaps understandable, given the observation of an elementary teacher who noted "assessment is controversial because it's people's children who are at stake." It also may be understandable in light of the large numbers of Albertans who are affected directly by how teaching and learning occurs in provincial schools.

Individuals who were interviewed on their own and in small groups offered observations that fall into four categories. They are assessment as an accountability tool, informing stakeholders, enculturation, and postsecondary gatekeeping.

Student assessment as teacher accountability. Perhaps surprisingly, it was mainly teachers who spoke in favor of increased teacher accountability. A common strand among elementary and secondary teachers' views was that the use of student assessment data to evaluate teachers and schools is a response to insufficient accountability in the education system. An elementary teacher observed that teachers are not held sufficiently accountable and a senior high school teacher observed, "We're not scrutinized enough as a profession." This view was echoed by a senior high school assistant principal who offered her opinion that, "Rankings [by the Fraser Institute] are a result of no previous accountability."

A group of senior high school teachers, who participated in a small group interview, offered the following comments. First, a male teacher suggested, "bad assessment begins with bad teachers." His colleague stated, "We get locked into things we've done for too long. We get lazy or tired." A third comment was very strong: "Teachers who are not performing should be removed from the profession." The group members agreed that, "Provincial diplomas are great equalizers."

The view that teacher accountability is inadequate, was corroborated by parents, one of whom stated his opinion that, "The teacher should be assessed more than the students." Similarly, a student in a rural alternative high school program reported, "My brother goes to the [regular] high school and he has [to hire] a tutor for $35 an hour to do what he should be learning in school." She continued by stating, "In a regular school, they sent you to get a tutor. [It's a] 'don't bother me' type of attitude."

Clearly, it is to be expected that an educational system as large as the one in Alberta will include individuals and groups who are dissatisfied. However, the pervasiveness of the views that reflected the political nature of student assessment suggest that educational stakeholders must continue to attend to calls for teacher accountability, high quality assessment practices, and differentiated assessment.

Informing stakeholders. Study findings included clear stakeholder understandings of the need to use student assessment to inform educational stakeholders, but interviewees articulated several cautions. First, a senior high school teacher suggested that informing stakeholders using questionable student assessment results is problematic but she thought that is the current situation: "Bad assessment results in misinformation. That's where we are."

An elementary school principal provided a view that represented a large number of educators who participated in the interviews. He said, "PATs [Provincial Achievement Tests] cause comparison of schools [and] if assessment is used to rate schools then it is not of value." The same individual offered the perspective that, "Doing well on the PATs causes a school to be hailed as a school of excellence." This frequently expressed view is one that recognizes possible negative consequences associated with provincial standardized tests. Additional controversy was provided by an elementary teacher suggested "some principals want their schools to look good."

Despite the political cautions offered by some study participants, parents want to know how to assess the quality of the schools their children attend because, as an elementary teacher claimed, "Parents shop for schools." Further, students reported that they and their parents also learn about schools by "word of mouth" and go where they think the best education is available. Thus, it appears that ongoing attention to informing stakeholders about student achievement is warranted.

Enculturation. Some study participants expressed their concerns about how colleagues have politicized assessment. They pointed to how "teachers mistrust the government" and how some educators believe that "the ministry is looking to try to standardize assessment" so teachers will be accounting "more and more" for their classroom assessment practices and for "our time." An elementary school teacher shared her perspective that some teachers "do practice test after practice test" because they believe they or their schools might suffer if students do not do well on standardized tests. A parallel view was offered by a senior high school teacher who cautioned that, "If you get lower marks for your class, you won't be teaching your Diploma class again."

A senior high school assistant principal provided evidence of how student assessment is politicized even within the teaching profession. He offered his colleagues the caution that, "I don't think the [teachers' group] waving [name of well known American speaker] is really in the best interest of teachers" because the researcher has "little relevance" [to

Alberta]. His concern was shared by an elementary school vice principal who warned that too much of the discussion about student assessment in Alberta includes "a lot of testing influence from the US." A related caution expressed by the senior high school assistant principal who went on to say, "Very seldom have I seen [unions] operate with the best interest of kids and their learning. It is about teachers." A junior high school teacher wondered if the [teachers' organization], though a support for teachers, is "perhaps too strong."

A senior high school teacher expressed a cautionary view that countered the hyperbole surrounding student assessment. He said, "We are talking about two different things, government testing and classroom testing." He suggested that educational stakeholders understand the strengths and limitations of each form of student assessment.

Another perspective demonstrated how teachers risk enculturation with particular views about student assessment. A novice senior high school teacher described what she saw as the challenge associated with being a new teacher and observing student assessment practices that she did not feel comfortable doing: "It's pretty tricky to go into a department and go 'thanks but that's not how I do it.' Because there are 14 people and 13 people were teaching longer than I have. I would have been insulting them."

Postsecondary gatekeeping. A senior high school council provided an important observation about student assessment in Alberta. They emphasized that at least some of the pressure on students, teachers, and schools arose from limited access to postsecondary institutions and the resulting competition among students for admission to universities and polytechnics. They suggested that increasing access to postsecondary education would reduce the pressure for high school students.

The school council members expressed their concern about current limits to postsecondary institutions. For example, one parent said, "Some average kids do well in postsecondary. We are limiting access for many young people who would be very successful."

Educators in other schools shared the parents' concern about access to higher education. For example, a junior high school teacher suggested that pressure on students to achieve on classroom and Diploma examinations comes in part from "fluctuating marks to get into postsecondary." However, a senior high school teacher pointed out what he saw as a need for Diploma examinations because they "are great equalizers in term of admission to universities in Alberta.

THE ALBERTA STUDENT ASSESSMENT STUDY IMPLICATIONS AND RECOMMENDATIONS

The Alberta Student Assessment Study research team was charged with achieving the following objectives:

1. Define optimal assessment theory and practice relative to:
   a. Curricular learning outcomes and performance standards and reporting of levels of achievement within grade.
   b. How external tests and classroom-based assessment of student achievement can be optimally used to inform decisions regarding student program needs and, when aggregated upwards, decisions at the school, jurisdiction, and provincial levels of decision-making relating to improving learning opportunities for students.
2. Describe how educational leadership can be strengthened to facilitate more effective classroom assessment and accurate and meaningful reporting of assessment information, including grade level of achievement, to parents and to Alberta Education.
3. Identify professional development models that are needed to build and enhance capacity in the area of classroom assessment (of, for and as learning) in Alberta schools.
4. Consider the question, "where do we go from here" in developing a holistic framework for classroom assessment for the province and provide recommendations based on what is learned from the preceding questions and areas of inquiry.

Each of the four objectives will be addressed in the following sections, which the research team decided to structure in the form of straightforward statements. It is extremely important to note here that the following statements were derived directly from study data gathered from over 3000 study participants over a two-year, multi-stage study. Further, the statements are supported by the theoretical and empirical reports found in the scholarly literature. Although some members of the Alberta educational community will hold differing views, opinions that will continue to help inform and shape the future of the provincial school system, what follows should be considered representative of the views about student assessment currently held by the majority of the members of the Alberta educational community.

Curricular Learning Outcomes: Optimal Theory and Practice

In this section curricular learning outcomes are considered in relation, first, to classroom-based assessment and, second, to provincial standardized assessment.

Classroom-based Assessment: Principles

The findings of The Alberta Student Assessment Study led the research team to propose the following theoretical principles that are intended to optimize classroom-based student assessment practices in Alberta schools.

1. Educators must know and understand the document *Principles for Fair Student Assessment Practices for Education in Canada* (Centre for Research in Applied Measurement and Evaluation, 1993)

2. Curriculum outcome provide assessment foci.
3. Assessment informs curriculum and instruction.
4. Educators will provide multiple, ongoing opportunities for students to demonstrate learning outcomes in a variety of ways.
5. Students know assessment purposes, criteria, and performances prior to being assessed.
6. Assessment data provide the basis for student and teacher reflection.
7. Teacher feedback must support student learning.
8. Maintain assessment focus on individual students.
9. Homework is designed to support learning outcomes.
10. Student voice must help shape assessment practices.
11. Students, teachers, and parents have access to technological tools that enhance student assessment.
12. Assessment practices respect student dignity.
13. Assessment must not be used to reward or punish.
14. Assessment of achievement is not aggregated with assessment of behaviour.
15. Timed assessments are used only when they align with curricular learning outcomes.
16. Neatness is assessed only when it directly relates to learning outcomes.
17. No-zero policies support student-learning outcomes.

Classroom-based Assessment: Practices

1. Educators must apply effectively *Principles for Fair Student Assessment Practices for Education in Canada* (Centre for Research in Applied Measurement and Evaluation. 1993)
2. Assessment tools and strategies will align overtly to the Program of Studies.
3. Teachers collaborate within and across grades and disciplines.
4. Assessment data are used to plan classroom instruction.
5. Students will have a variety of assessment opportunities to demonstrate knowledge, skill, and understanding.
6. Teacher feedback to students must be clear, honest, frequent, timely, sensitive, constructive, and motivating.
7. Assessment will be differentiated in order to meet individual student learning needs.
8. Ensure that graded tests are returned to students so they can improve their learning.
9. Assessment data are used for individual student program planning.
10. Students will engage in assessment design.
11. Teachers include students in rubric construction.
12. Students are allowed, encouraged, and taught to use technology to do their work.
13. Teachers have access to online test banks.
14. Teachers use technology-adapted assessment.
15. All members of classroom and school communities use technology networks to communicate about student assessment.
16. Technological tools are used to align assessment and curriculum outcomes.
17. Assistive technology is available for learners with special needs.
18. Late assignments are accepted without penalty.
19. Bonus marks are not used.
20. Homework assignments are designed explicitly to foster learning outcomes contained in the Program of Studies.

21. Assessment preparation excludes over use of practice tests and copying notes from blackboards or PowerPoint slides.
22. Frequency of assessments is not overwhelming for students.

Provincial Assessment: Principles

The findings of The Alberta Student Assessment Study findings led the research team to propose the following theoretical principles that are intended to optimize the provincial standardized testing programs in Alberta.

1. Provincial standardized test data are gathered by a public institution using public funds for the purposes of informing the public and improving the quality of education.
2. Provincial standardized tests address the widely articulated desire of stakeholders to know how schools and the educational system are performing.
3. Provincial standardized tests provide benchmarks for Alberta teachers.
4. Provincial standardized tests assist with curriculum monitoring and revision.
5. Provincial achievement tests and diploma examinations are constructed in accordance with sound principles of assessment.
6. Provincial standardized tests are constructed so that students have a variety of ways to demonstrate their learning.
7. Rigorous marking procedures of provincial standardized tests provide grading consistency and facilitate valid inferences from test data.
8. Provincial standardized tests provide credibility to the grades of Alberta students.
9. Diploma examinations assist Grade 12 graduates with transferability within a globalized context.
10. Educators are knowledgeable of the strengths and limitations of provincial standardized tests.
11. Provincial standardized testing helps teachers clarify and focus on curriculum learning outcomes.
12. Provincial standardized testing aligns instructional practices with learning outcomes.
13. Provincial standardized tests lead teachers to incorporate higher level questions into their classroom assessment.
14. Provincial standardized tests are administered under circumstances that are conducive to test writing.
15. Provincial standardized tests maximize cultural sensitivity in recognition of student diversity.
16. Weightings of Grade 12 Diploma Examinations provide balance for student grading.

Provincial Assessment: Practices

1. Provincial standardized tests' alignment with learning outcomes is maximized.
2. Assessment data are used to refine provincial curricula.
3. Provincial standardized test results are used to revise program design and instructional practices.
4. Provincial standardized tests address all levels of knowledge.

5. Teachers, principals, and superintendents maintain a balanced focus on provincial standardized tests so that undue stress for students is not introduced.
6. Provincial standardized tests reflect a range of cultural contexts.
7. Teachers address all curricular learning outcomes, not only those tested by provincial standardized tests and examinations.
8. Students are able to write provincial standardized tests in comfortable environments.
9. Students are allowed sufficient time to demonstrate on provincial standardized tests what they know and can do.
10. Educator decisions reflect the strengths and limitations of standardized test data.
11. All stakeholders report and use provincial assessment data accurately and honestly.
12. Provincial achievement test and diploma examination results are reported in a user-friendly format.

Performance Standards: Optimal Theory and Practice

In this section performance standards are addressed in terms of optimal assessment theory and practice.

Performance Standards: Principles

1. Performance standards serve a benchmarking function that guides educators and informs students, parents, and other stakeholders.
2. Performance standards are aligned with curricular learning outcomes in the Program of Studies.
3. Performance standards must reflect all levels of Bloom/Krathwohl's Taxonomies.
4. Teachers must know the Program of Studies for the courses they teach.
5. Classroom and provincial standardized assessments reflect performance standards.
6. Teachers are familiar with achievement indicators for all courses.
7. Classroom instruction is based upon Program of Studies learning outcomes.
8. Classroom instruction is predicated upon appropriate outcomes that are designed for students representing diversity in ability, culture, race, and religion.
9. Performance standards are predicated upon teacher knowledge of and ability to use achievement indicators, exemplars, rubrics, and scoring guides.
10. Teachers have access to and know how to use descriptions of performance standards in all courses.
11. Rubrics based on achievement indicators are used in all courses.
12. Students participate in the design and use of rubrics.
13. Information and communication technology is integrated with performance standards in all courses.

Performance Standards: Practices

1. Assessment foci address course components in proportion to their coverage within the Program of Studies.
2. Assessments reflect coherence across performance standards, curricular learning outcomes, and the Program of Studies.
3. Assessments reflect the full range of Bloom/Krathwohl Taxonomy levels.
4. Assessment tools incorporate current student assessment theory and practice.
5. Assessment tools are benchmarked against those used in similar settings to maximize validity and reliability.
6. Student voice is manifested explicitly in assessment design.
7. Differentiated assessment is evident in all courses.
8. Use of information and communication technology is evident in classroom and provincial standardized tests.
9. Teachers use online databases of templates for assessment tools.
10. Information on performance standards/rubrics is available on a coherent user-friendly Alberta Education website.

Grade Level of Achievement Reporting: Optimal Theory and Practice

In this section reporting of levels of achievement within grade is addressed in terms of optimal assessment theory and practice.

Grade Level of Achievement Reporting: Principles

1. Accurate grade level of achievement reporting provides credibility to assessments conducted in courses not part of the provincial standardized testing program.
2. All stakeholders share the clear understanding that grade level of achievement reporting is intended solely to inform educational stakeholders about student progress, to analyze the achievement of various student populations, to evaluate the impact of education programs, and to inform instructional interventions.
3. Illustrative examples of below, at, and above grade level are accessible and used by teachers in all courses.

Grade Level of Achievement Reporting: Practices

1. Grade level of achievement reporting is accurate and consistent across schools and districts.
2. Grade level of achievement reporting demonstrates that teachers understand what constitutes below, at, and above grade level of achievement in each course.
3. Illustrative rubrics and examples of student work are included in the Program of Studies.

Using External Tests and Classroom-based Assessment for Decision Making

This section of the report provides guidelines for optimal use of classroom-based assessment and external testing for decision making by students and teachers, plus decision making at the school, jurisdiction, and provincial levels.

External Testing

Guidelines for optimal use of external test data are presented below in relation to the student and teacher role and, also, by jurisdictional level.

Student decision making. The results of external examinations, particularly Grade 12 Diploma Examinations, should be useful for individual students as they take the following actions.

1. Apply to postsecondary institutions.
2. Focus on potential careers.

Teacher decision making. Similarly, the results of external testing should inform individual educators as they make the following decisions, ones which all teachers make regularly as they progress through their careers.

1. Counsel students about academic and career choices.
2. Reflect purposefully on classroom assessment practices.
3. Critically analyze personal understandings of curriculum.
4. Choose mentors for teachers.
5. Select teacher career options and preferences.

School-level decision making

1. Set school goals
2. Benchmark across classrooms and schools.
3. Analyze discrepancies between expected and achieved student grades.
4. Initiate change processes.
5. Identify staffing needs and preferences.
6. Identify professional development needs.
7. Allocate resources.
8. Focus on curricula.
9. Maintain consistency across classrooms and departments.
10. Demonstrate improvement.

Jurisdiction-level decision making

1. Set district goals.
2. Benchmark across school districts.
3. Create multi-year district plans.
4. Analyze provincial assessment data.
5. (Re)Evaluate school improvement efforts.
6. Allocate district resources.
7. Recognize school success.

Provincial-level decision making

1. Benchmark with other provinces and countries.
2. Review provincial educational policies.

3. Review assessment tools.
4. Revise curriculum content and structure.
5. Enhance department practices.
6. Fund school improvement initiatives.

Classroom-based Assessment

Guidelines for optimal use classroom-assessment data are presented below in relation to the student and teacher role and, also, by jurisdictional level.

Student decision making

1. Prioritize tasks and activities.
2. Decide on preferred learning and work styles.
3. Manage time.
4. Celebrate achievement.

Teacher decision making

1. Set program and instructional goals collaboratively with other teachers.
2. Set goals with and for individual students.
3. Pace instructional units.
4. Differentiate instruction.
5. Accommodate student-learning needs.
6. Involve students in decisions about their learning.
7. Select assessment practices suitable for personal practice.
8. Hone assessment tools and practices.
9. Re-teach.
10. Facilitate shared decision making among students, parents, teachers, specialists, and school administrators.
11. Inform appropriate retention and promotion decisions.
12. Advise parents.
13. Recognize student achievement.
14. Celebrate professional growth.

School-level decision making

1. Use fair assessment practices.
2. Identify acceptable professional practices.
3. Promote best assessment practice.
4. Support differentiated instruction.
5. Involve students in decisions about assessment practices such as rubric development.
6. Inform students and parents.
7. Engage in ongoing instructional improvement.
8. Establish induction, mentoring, and ongoing professional growth processes.
9. Create professional learning communities.
10. Correct inappropriate testing practices.

Jurisdiction-level decision making

1. Challenge complacency.
2. Reduce confusion.

Strengthening Assessment Leadership

The guidelines for educational leaders that follow address the study objective to describe how educational leaders can strengthen their professional practice in support of effective student assessment.

Facilitating Effective Classroom Assessment

The guidelines presented here were identified during the study as the leadership practices that support best assessment practices in classrooms.

1. Lead with integrity.
2. Maintain a strong assessment knowledge base.
3. Use assessment data knowledgeably to guide decision making.
4. Make best assessment practices a school-wide priority.
5. Establish acceptable assessment practices.
6. Ensure teachers assess students fairly.
7. Focus on the personal impact of assessment practices on individual students.
8. Challenge complacency.
9. Communicate clearly.
10. Garner sufficient support from members of school communities.
11. Share assessment leadership.
12. Create space for student involvement in assessment decision making.
13. Provide time for professional development.
14. Manage change successfully.
15. Be persistent in pursuing best assessment practices.
16. Maintain self-efficacy and resilience.
17. Celebrate professional growth.
18. Celebrate improvements in student achievement.
19. Continue in one school long enough to provide stability and create sustainability.

Facilitating Accurate and Meaningful Reporting of Assessment Information

Best leadership practices are described below as they apply to facilitating accurate and meaningful reporting of assessment information to parents and to Alberta Education.

To parents

1. Ensure that teachers, principals, students, and parents are full partners in the reporting process.
2. Align educationally sound reporting with community expectations.
3. Ensure that report cards are clear, accurate, and respectful.
4. Report academic achievement, progress, and behaviour separately.
5. Recognize that reducing grades to reflect misbehaviour is punitive and unethical.
6. Report with a focus on the whole student.

7. Advocate for active student engagement in reporting assessment results to parents.
8. Conduct parent-student-teacher conferences in settings that are conducive to respectful conversation.
9. Ensure that communications among school community members are timely.
10. Establish expectations that communications are respectful.
11. Monitor paper-based and online written communications between school and home.
12. Move beyond traditional forms of celebrating excellence while recognizing the needs of community members.
13. Consider new software allowing student assignments, grades, and attendance to be accessible by students, teachers, parents, and administrators on an ongoing basis.
14. Adopt technology that facilitates increased communication about student achievement among students, teachers, and parents.
15. Ensure that teachers use technology consistently and effectively to communicate with students and parents.
16. Use school websites to provide general feedback to the school community.

To Alberta Education

1. Encourage teachers to participate in Alberta Education test item writing.
2. Encourage teachers to participate in marking of provincial standardized tests so that teachers' experiences and knowledge can be communicated to Alberta Education personnel.

Facilitating Accurate and Meaningful Reporting of Grade Level of Achievement

1. Monitor grade level of achievement reporting.
2. Include discussion of grade level of achievement reporting in ongoing school-based professional development.
3. Use grade level of achievement reporting data to plan programming for individuals and demographically unique groups of students.

Professional Development that Promotes Effective Classroom Assessment

Prescriptive models for professional development reduce participant ownership and engagement in the design, implementation, and evaluation of professional development. Therefore, rather than identify specific models for professional development, the research team used the study findings to draft a set of principles for professional development and to present a set of guidelines for learning as educators move from preservice education through early, mid, and late career stages.

Principles for Professional Development

1. Professional development will focus on instructional improvement.
2. Participation in ongoing professional development is a professional obligation for every educator.
3. The Alberta Program of Studies will provide the basic focus for professional development.
4. Fair student assessment practice is a shared responsibility for all educators.

5. Professional development will focus on improving student learning.
6. Professional development will be continuous, substantive, and sustainable.
7. Professional development will be practical.
8. Professional development opportunities promote collaboration among educators.
9. Professional development will be evaluated rigorously with student achievement as a primary focus.

Preservice Teacher Learning Guidelines

Needs

1. Explicit teaching of assessment knowledge and skills.
2. Knowledge of assessment unique to specific disciplines.
3. Modeling of appropriate assessment practices by university faculty members.
4. Consistency across universities.

Knowledge

1. Assessment theory.
2. Practicalities of the full range of assessment methods.
3. Differentiated assessment.
4. Creation of an ethic of care in assessment for a diverse student population.
5. Understanding that assessment is a responsibility shared by all teachers in a school.

Approaches

1. Balance among theory, practice, and reflection.
2. Balance practicum and campus-based learning.

Challenges

1. Inconsistent faculty member knowledge and understanding of assessment practices.
2. Students observing good assessment practices in schools but experiencing outdated assessment practices at university level or vice-versa.
3. University instructors with no school-based teaching experience.

Opportunities

1. Knowledgeable novice teachers.

Evaluation of preservice learning

1. Critical analysis of novice teachers' student assessment practices.
2. Impact on educational leaders' preference to hire graduates of particular teacher education programs.

Needs

1. Time.
2. Commitment.
3. Experts.
4. Skill development.
5. Resources.
6. Broad exposure to varied assessment practices.
7. Capacity to accept the possibility and discomfort of change.
8. Clear vision, informed by theory and practice, for professional development on assessment.

Knowledge

1. Assessment design.
2. Knowledge of and appropriate use of formative and summative assessment.
3. Statistical literacy.

Approaches

1. Critical reflection.
2. Mentoring.
3. Peer coaching.
4. Collaboration.
5. Within and across-school visits.
6. Teacher evaluation.
7. Marking provincial standardized tests.
8. Action research.
9. University classes.

Challenges

1. Time.
2. One-shot PD.
3. Teachers' convention.
4. Change fatigue.
5. Fear of change.
6. Fear of transparent assessment practices.
7. Consistency in assessment practices.
8. Insufficient structure.
9. Uncritical acceptance of biased perceptions of assessment.
10. Enculturation.
11. Complacency.
12. Purposeful disengagement.
13. Advocacy of culturally inappropriate policies and practices.
14. Value-laden terminology.

Opportunities

1. Collective openness to new, different, and better practices.
2. Capacity-building initiatives through, for example, Alberta Initiative for School Improvement, regional consortia, and Alberta Assessment Consortium.
3. Technology-mediated professional development.

Evaluation of inservice

1. Critical analysis of intended changes.
2. Teachers' implementation of intended assessment practices.
3. Impact of changes to assessment practices and student learning.

Where Do We Go From Here?

The findings of The Alberta Student Assessment Study allowed the research team to offer a set of observations about current practices, values, and beliefs that relate to student assessment as it is conducted in classrooms and through provincial standardized testing programs. Those observations and suggested guidelines are intended to inform practitioners, policy makers, and teacher educators in Alberta, indeed, all educational stakeholders. However, perhaps the most important and highest impact task assigned to the research team was to answer the question, "Where do we go from here?"

This section of our report offers answers to this question in two areas. First, recommendations are offered in relation to the development of a holistic framework for classroom assessment for the province. Then, the researchers offer a set of additional recommendations that draw on all that the research team learned while conducting the Alberta Student Assessment Study.

Recommendations for Developing a Holistic Framework for Classroom Assessment

Assessment in Alberta will:

1. Recognize that public education is critical to the well being of individual students and to society generally and that some form of monitoring such as the provincial standardized testing program is essential for the effectiveness of the Alberta education system.
2. Continue Provincial Achievement Tests[22] and Diploma Examinations[23].
3. Make provincial assessment data publicly accessible[24].
4. Continue current performance standards that serve important benchmarking functions.
5. Recognize that all educators have a responsibility to report and explain provincial and classroom assessment results accurately and from a balanced perspective that emphasizes both the strengths and limitations of test results.

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[22] The only area where notable reservations about achievement testing were expressed is the Grade 3 testing and even those data were far outweighed by support. No clear preferred and/or viable alternatives to standardized achievement testing emerged in the study.

[23] The only question that arose relates to the actual weighting. No preferred weighting emerged to guide a change from the current 50% weighting of diploma examinations. The data suggest that Diploma Examinations provide a number of benefits to students and the education system generally.

[24] The importance of keeping education data public outweighs the danger of misreporting by independent agencies.

6. Require school- and district-based leaders to demonstrate assessment literacy within their instructional leadership practice across all subject areas.
7. Be guided by the *Principles for Fair Student Assessment Practices for Education in Canada* (Centre for Research in Applied Measurement and Evaluation, 1993).
8. Require teachers to demonstrate detailed knowledge of the Program of Studies for the courses they teach.
9. Differentiate assessment to accommodate the ability, social, cultural, and linguistic needs of every student.
10. Incorporate student voice into all assessment practices.
11. Make assessment criteria explicit to students prior to all assessment.
12. Provide access for students, teachers, and parents to technological tools that enhance student assessment.
13. Report academic achievement, behaviour, and social-emotional development separately and accurately.
14. Use timed assessment sparingly and appropriately, only when pedagogically and practically appropriate.
15. Be an explicitly taught, practice-oriented component of teacher education programs in Alberta.
16. Be included in the ongoing evaluation of the knowledge and expertise of teachers, principals, and school district personnel.
17. Focus on coherence among curriculum-teaching-assessment-professional development.
18. Be characterized by educator ongoing participation in coordinated and coherent school and district-based professional development focusing on optimal student assessment.
19. Be supported by professional development that occurs within and across schools, plus within and across disciplines.
20. Use professional development knowledge held by colleagues within educational organizations and from outside organizations.
21. Emerge in part from the professional needs of school-based educators and, also, from school district and Alberta Education leaders.
22. Require systematic and rigorous evaluation of professional development in relation to how it impacts student learning.

Additional Recommendations

Assessment in Alberta will:

1. Consider using more performance-based assessment tools that would address additional components of the Program of Studies, including non-core subjects.
2. Address assessment that is more appropriate and sensitive to the learning needs of students currently living in the margins of mainstream schools.
3. Be supported by evidence-based rather than opinion-based professional development.
4. Be led by principals and superintendents whose leadership preparation programs include a focus on assessment literacy.
5. Leave the use of Provincial Achievement Test results in the calculation of individual students' report card marks to the discretion of classroom teachers.

6. Be explained unambiguously, systematically, and in a widely accessible format by Alberta Education in terms of the purposes and intended uses of provincial assessment data to counter misinformation and misunderstanding.
7. Be supported by an Alberta Education online database containing assessment tools, templates, and exemplars.
8. Include widespread use of assistive technology.
9. Include technology-mediated professional development that facilitates provincial, national, and international learning communities.
10. Inform student assessment policies and practices with ongoing research conducted in the province.

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